

SECTION III

THE EFFECTIVENESS STUDIES ON IMPROVEMENT AND CONTROL OF DEVIANT DRIVERS

California law defines the (prima facie) negligent operator as a driver whose driving record shows a violation point count of four or more points in 12 months, six or more points in 24 months, or eight or more points in 36 months. Class A or B (commercial heavy vehicle) drivers who appear for a hearing may be allowed six or more points in 12 months, eight or more points in 24 months, or ten or more points in 36 months before they are classified as negligent operators. Each traffic conviction involving the unsafe operation of a motor vehicle, and each accident for which the driver is deemed responsible, counts one point. More serious convictions, such as reckless driving, drunk driving, driving under the influence of drugs, and property damage hit-and-run, count two points. (If the offenses occurred in a heavy commercial vehicle or while transporting hazardous material, the point value of the conviction is 1.5 times the above values.) All drivers legally defined as negligent operators are subject to driver improvement efforts.

The Driver Improvement Program of the California Department of Motor Vehicles operates under discretionary authority granted to it by various sections of the California Vehicle Code. The objectives of this program are fourfold: (1) to achieve improvement in the driving habits and skills of drivers classed as negligent operators; (2) to determine the disqualifying extent of physical or mental defects, disabilities or deficiencies; (3) to prescribe appropriate driving restrictions or conditions of probation for those cases where adverse physical or mental conditions exist but do not appear to preclude safe driving, and (4) to eliminate unsafe, incompetent, and physically or mentally unqualified drivers by refusing, restricting, or withdrawing the driving privilege. The department also administers programs where driver control actions (e.g., license restriction, suspension, and revocation) are mandated by statute.

The department is also responsible for curriculum development, licensing and monitoring of court traffic-violation school programs (CVC Sections 11202.5 & 1803.5). The evaluation of current driver-control programs and the development and evaluation of alternative approaches constitute a major focus of the department's Research and Development activities.

TITLE: Control of the Negligent Driver--Part I: Characteristics of Negligent Drivers

AUTHOR(S): Ronald S. Coppin & Ira Samuels

DATE: February 1961

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: 8

NTIS NUMBER: PB-177647

PROJECT OBJECTIVE:

To discover if there are characteristics differentiating negligent drivers from the "average" driver, and if relationships exist between actual driving performance and mileage driven, occupation, age, or sex.

SUMMARY:

This study was based on a sample of 4,081 negligent drivers who had their first driver improvement contact with the Department of Motor Vehicles in 1955. Their driver records were analyzed for three years before and three years after the initial driver improvement contact.

As compared to the general driving population, negligent drivers were found to be significantly more often young, male, and holders of chauffeur's licenses. Occupationally, they were over represented in the laborer/semi-skilled worker and professional driver categories; underrepresented in the executive/professional/ semi-professional and clerical/small business owner/office worker categories. Annual mileage reported was generally higher for the negligent drivers. A summary of the driver records for three years before and after the first hearing is given in the report.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

None.

SUPPLEMENTARY INFORMATION:

None.

TITLE: A Controlled Evaluation of Group Driver Improvement Meetings

AUTHOR(S): Ronald S. Coppin

DATE: October 1961

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: 9

NTIS NUMBER: PB-218848

PROJECT OBJECTIVE:

To describe and analyze the results of an experimental program of group driver improvement meetings.

SUMMARY:

The group meetings appeared to have a greater effect on the older driver than on the younger driver. The group meetings had a significant effect in delaying a group of poor drivers from incurring further moving violations. A significantly greater reduction in convictions was noted for the meeting group as compared to the control group, although no corresponding reduction in accidents was noted. On a 12-month basis, 90% of the subjects who attended a group meeting improved their driving records, while only 83% of the control group showed improvement.

Further research into defining the optimum program was suggested, but group meetings were definitely recommended as one phase of the California driver improvement program.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Group meetings were incorporated into the department's handling of deviant drivers. A follow-up study was done on a larger sample in 1965 (see Coppin et al., Report #17).

SUPPLEMENTARY INFORMATION:

Published in *Traffic Safety Research Review*, 6(3), 17-23, 1962.

TITLE: Control of the Negligent Driver--Part II: Driving Performance of Negligent Drivers

AUTHOR(S): Ronald S. Coppin &
G. van Oldenbeek

DATE: October 1962

REPORT NUMBER: 11

FUNDING SOURCE: Special legislative
appropriation (SB 1217)

NTIS NUMBER: PB-177648

PROJECT OBJECTIVE:

To make thorough and comparative analyses of performance of negligent drivers before and after departmental action, and of the differences, if any, associated with age, type of action taken, mileage driven, occupation, sex, type of license, and other factors or combinations of factors.

SUMMARY:

This report is based on the same sample as that of Part I (page III-1) and showed the following:

For three years after action, the driving records of 85% of the drivers improved in terms of both violations and accidents. Improvement was significantly greater for violations than for accidents. Despite this improvement, the post-action driving record of negligent drivers was still significantly poorer than the record of the average California driver for both violations and accidents. The younger age group showed less improvement than the older age group. Probation, warning, and no action accounted for 90% of all the actions taken by the department against these negligent drivers. The more severe action groups accrued a greater number of subsequent actions than the less severe action groups. Holding age constant, the higher-mileage groups tended to have poorer post-action records than the lower-mileage groups.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

None.

SUPPLEMENTARY INFORMATION:

None.

TITLE: A Re-Evaluation of Group Driver Improvement Meetings

AUTHOR(S): Ronald S. Coppin,
William C. Marsh, &
Raymond C. Peck

DATE: January 1965

REPORT NUMBER: 17

FUNDING SOURCE: Departmental Budget

NTIS NUMBER: PB-218849

PROJECT OBJECTIVE:

To reevaluate the effectiveness of group driver improvement meetings after they had become a fully operative statewide program.

SUMMARY:

The group approach originally evaluated in 1961 (Coppin, Report #9) was re-evaluated to determine if the program was still effective. Both studies utilized a control group for comparison, although assignment to treatment was not random. Both reports indicated that the approach was an effective means of reducing violations, but there was no evidence of reduced accident frequency. It was recommended that different types of group and individual approaches be tried so that an optimum approach could be developed. It was also recommended that classical experimental design procedures be used in subsequent evaluations, including randomization.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The department continued the policy (adopted as a result of Report #9) of referring borderline negligent operator cases to group meetings; if the driver's performance continued to decline, individual hearings were then scheduled.

SUPPLEMENTARY INFORMATION:

Published in *Highway Research Record*, 163, 120-131, 1967.

TITLE: Driving Under Suspension and Revocation: A Study of Suspended and Revoked Drivers Classified as Negligent Operators

AUTHOR(S): G. van Oldenbeek &
Ronald S. Coppin

DATE: January 1965

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: 18

NTIS NUMBER: PB-218850

PROJECT OBJECTIVE:

To examine a six-year record of 1,326 negligent operators who were suspended or revoked to determine how many continued to drive and how many were convicted of this offense as well as the violation for which they were stopped.

SUMMARY:

Conviction and accident records over a six-year period showed that 33% of suspended and 68% of revoked negligent drivers accrued accidents or traffic convictions during suspension or revocation. Almost 99% of revoked or suspended drivers were males. There was an inverse relationship between driving during suspension or revocation and age. There appeared to be no relation between driving under suspension or revocation and annual mileage. There was little relationship between the frequency of driving under suspension or revocation and the severity of the penalties assessed by the courts. Out of every 100 possible convictions for driving under suspension or revocation only 44 materialized; the other 56 convictions were for lesser violations.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Subsequent studies of the issue confirmed the original findings and have shown that enforcement of driving under suspension has continued to decline. The more recent studies have shown that other groups (such as the physically and mentally impaired or drunk drivers) respond more favorably to suspension than do negligent drivers.

SUPPLEMENTARY INFORMATION:

See Report #75 (Hagen et al.) and Report #129 (DeYoung) for more recent studies.

TITLE: The Effectiveness of Short Individual Driver Improvement Sessions

AUTHOR(S): Ronald S. Coppin,
Raymond C. Peck,
Alan Lew, &
William C. Marsh

DATE: October 1965

REPORT NUMBER: 22

FUNDING SOURCE: Federal Highway
Administration

NTIS NUMBER: PB-169866

PROJECT OBJECTIVE:

To evaluate the effect of individual hearings on the subsequent driver records of negligent operators.

SUMMARY:

Negligent drivers required to attend hearings were compared with a retrospectively matched group of negligent drivers not receiving hearings (control group). The hearing group had significantly fewer citations in the first subsequent year than the control group, but there were no significant differences with respect to subsequent accident frequency. The various age groups did not appear to have been differentially affected by the hearing process. It could not be concluded that it was the face-to-face contact with the hearing analyst which effected the subsequent reduction in citations for the hearing group because the subsequent citation and accident frequencies of those who attended their scheduled hearing were not significantly different from the frequencies of those who received the notice but did not attend. Much of the effect might therefore be attributable to receipt of the notice. The subsequent accident and citation frequencies of all hearing subjects, were still approximately twice as high as those of a similarly stratified sample from the overall California driving population. The authors concluded that biases stemming from the retrospective nature of the study prevented making definitive conclusions regarding the effectiveness of individual hearings on accidents. It was recommended that the department conduct an experimentally controlled prospective evaluation of the program.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

A large scale, truly randomized experiment was implemented and completed (see Marsh, Report #36).

SUPPLEMENTARY INFORMATION:

A shortened version of the report was published in *Highway Research Record*, 195, 1-14, 1967.

TITLE: The Fatal Accident Reexamination Program in California

AUTHOR(S): Ronald S. Coppin &
G. van Oldenbeek

DATE: January 1966

FUNDING SOURCE: Federal Highway
Administration

REPORT NUMBER: 23

NTIS NUMBER: PB-173867

PROJECT OBJECTIVE:

To establish a descriptive profile of the re-examined fatal accident driver and to evaluate three-year prior and subsequent driving records of such drivers.

SUMMARY:

When compared to the average California male driver, male drivers involved in fatal accidents were younger, less experienced drivers, less often married, less often insured, and had similar accident rates but significantly worse conviction rates both before and after the accident involving a fatality. "At fault" male drivers, as opposed to those not cited at the time of the fatal accident, showed the same trends within the fatal driver group; in addition, they were more often employed in farm or semiskilled work. Females were proportionally less involved in fatal accidents as drivers and were more often divorced and less often experienced drivers than were males. They showed no significant differences in accident and conviction rates from average drivers. Both sexes reported higher annual mileage than average. There was no difference in corrective lens requirements when compared to the average driving population. Only 0.4% of the group failed the reexamination drive tests, indicating that driving skill was not a major factor in this group.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

None; descriptive data only.

SUPPLEMENTARY INFORMATION:

A subsequent study (Helander, Report #85) led to a elimination of the use of drive tests in reexamining most accident-involved drivers.

TITLE: Control of the Negligent Driver--Part III: Six Year After Action Driving Record

AUTHOR(S): G. van Oldenbeek &
Ronald S. Coppin

DATE: June 1966

REPORT NUMBER: 25

FUNDING SOURCE: Departmental Budget

NTIS NUMBER: PB-177649

PROJECT OBJECTIVE:

To examine the percentage of drivers who either remained in or returned to the negligent driver category after original action; to arrive at a profile of the drivers who remained negligent drivers.

SUMMARY:

The driver records of 4,034 negligent drivers were analyzed for a six-year period after their first contact with the Department of Motor Vehicles. One in six remained a negligent driver during the first three years after action and one-fourth of these remained negligent drivers for the entire six-year period after the first action. For the entire sample of negligent drivers there was a significant improvement in the driving record for the second three years when compared with the first three years after the original action. For both three-year periods the driver record of the sample was significantly poorer than that of the average California driver. For convictions and accidents there was a general trend of high subsequent counts' being associated with high prior counts. Men were significantly overrepresented; in the negligent-driver sample the ratio of men to women was 50 to 2 while in the driving population the ratio was 3 to 2. More young and fewer older negligent drivers remained in the negligent-driver category. Revoked and suspended negligent drivers remained negligent drivers more often than did negligent drivers who received probation or no action as a first action.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

None.

SUPPLEMENTARY INFORMATION:

None.

TITLE: Modifying Negligent Driving Behavior Through Warning Letters

AUTHOR(S): Robin S. McBride &
Raymond C. Peck

DATE: August 1969

REPORT NUMBER: 30

FUNDING SOURCE: Federal Highway
Administration

NTIS NUMBER: PB-187774

PROJECT OBJECTIVE:

To investigate the relative impact of various types of warning letters on the subsequent driving record of negligent drivers. Levels of threat and intimacy were manipulated.

SUMMARY:

From the standpoint of collision reduction and cost-benefit, a warning-letter program was clearly supported by the study findings. The experimental low-threat letters and the DMV standard letter were more effective than the high-threat letters in reducing collision frequency, and all letters resulted in fewer collisions than for the no-letter control group. The findings did not support sending a short questionnaire with the warning letter. A reinforcement letter issued to drivers who had maintained "clean" records was effective only on those subjects who initially received the low threat/highly personal letter. Although the warning letters had some impact on subsequent convictions, the effect was smaller than with collisions and did not vary by type of letter.

To achieve a maximum amount of collision reduction, the data indicated that a low threat/low personal letter should be used for all female drivers and married male drivers under 30, whereas the standard letter should be used for all other drivers. However, it was recommended that a study be conducted to make sure that the present findings could be replicated before adopting a reinforcement letter program or using different letters for different age and sex groups.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The department implemented the low threat/low intimacy letter based on this study. A subsequent study did not support the adoption of a reinforcement letter program.

SUPPLEMENTARY INFORMATION:

Received the 1970 Metropolitan Life Award of Honor for Research in Accident Prevention. Published in *Accident Analysis and Prevention*, 2(3), 1-28 1970.

TITLE: Modifying Negligent Driving Behavior: Evaluation of Selected Driver Improvement Techniques

AUTHOR(S): William C. Marsh

DATE: March 1971

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: 36

NTIS NUMBER: PB-218853

PROJECT OBJECTIVE:

To compare and evaluate eight different methods of dealing with negligent drivers.

SUMMARY:

A total of 15,290 California drivers who met specific criteria were selected as subjects and randomly assigned to one of the following treatments:

1. Control Group
2. Warning Letter (W/L)
3. Subject Interaction Meeting (SIM)
4. Leader Interaction Meeting (LIM)
5. Group Educational Meeting (GEM)
6. Driver Improvement Meeting (DIM)
7. Group Administrative Review (GAR)
8. Regular Individual Hearing (RIH)
9. Experimental Individual Hearing (EIH)

Each Subject's driver record was examined for collision and conviction reports during the year after his selection.

Comparisons were made between each treatment and an untreated (control) group. When the records for males and females were combined, only the group scheduled for GEMs had a collision rate that was significantly lower than that of the control group ($p < .20$, two tailed). Cost-benefit analysis indicated that the GEM was also cost-beneficial. The department's regular group meeting program (DIM) had no impact on accidents. Although several other treatment groups showed a significant reduction in convictions compared to the control group, the GEM did not. Furthermore, the drivers scheduled for GARs had significantly more collisions than the control group—a finding unique in research involving driver improvement programs. The difference in collision rates between the warning-letter and control groups did not even approach statistical significance. In general, treatment effects on convictions were much larger than the collision effects, with some of the contrasts exceeding conventional significance levels ($p < .05$).

Because men represented almost 90% of the total sample, the rank order of the treatment for men was almost identical to the order for both sexes combined. For women, the picture was quite different. Five treatments (one of which was the GAR) had significantly lower collision rates than the control group, but only the two individual hearing treatments (RIH and EIH) showed a significant reduction in convictions compared to the control group. The

size of the treatment effects on collisions was considerably larger than for males and, despite the much smaller female *N*s, tended to reveal higher significance levels.

An analysis was also performed on the effects of a follow-up hearing administered to drivers who continued to accumulate traffic convictions and collisions after their initial treatment. This analysis indicated that such follow-up action results in further collision reduction except in those cases where no initial treatment was administered (control group). This was interpreted as support for DMV's practice of progressing from mild to more severe actions when a driver continues to be involved in collisions and traffic convictions.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Acting upon recommendations within the report, the department instituted use of the GEM on a statewide basis for both sexes and eliminated the DIM, which had been the department's operational group meeting.

SUPPLEMENTARY INFORMATION:

None.

TITLE: The Effectiveness of a Uniform Traffic School Curriculum for Negligent Drivers

AUTHOR(S): Richard M. Harano &
Raymond C. Peck

DATE: June 1971

REPORT NUMBER: 37

FUNDING SOURCE: Departmental Budget

NTIS NUMBER: PB-208440

PROJECT OBJECTIVE:

Evaluate the effectiveness of a uniform traffic school curriculum developed for the traffic violation repeater.

SUMMARY:

Drivers in four California cities appearing before the traffic court for a recent traffic violation were randomly assigned by the judge to either the new traffic school (the Uniform Driver Improvement School or UDIS) or to a control group. A sample of violators attending the regular or standard traffic school in Los Angeles was also randomly selected for additional comparisons. A mail questionnaire was used to obtain additional information not available on the subject's driver record.

Comparisons between the school and control groups on various biographical and prior driver record variables indicated that the judges exercised some selectivity in the treatment assignment. Therefore, various statistical adjustments were necessary to control for these biases. The effectiveness of the UDIS program appeared to compare favorably with that of the regular or standard traffic school program for male drivers, although the results were more suggestive than conclusive.

Cost-effectiveness figures showed that the accident reduction produced by the UDIS resulted in a savings of \$3,807 per 100 male drivers, which is substantially less than that achieved by the Department of Motor Vehicles' one-session Group Educational Meeting (GEM). Therefore, the UDIS or similarly lengthy courses should not be considered desirable alternatives to the GEM or implemented on a statewide basis without further modifications to improve cost-effectiveness. These modifications might include (1) shortening the length of the course, (2) modifying course content to improve those types of drivers who did not benefit from the course, and (3) focusing only on those drivers who benefited from the course. The authors feel that a more systematic approach would be to utilize the more extensive court school programs for those drivers who continue to violate after having already received a warning letter and attended the short-session GEM. However, implementation of an integrated state driver improvement program will require greater coordination between DMV and the courts than has existed in the past.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The report has had no discernible impact on court violator schools (see Peck et al., Report #71; Gebers et al., Report #113). It has been instrumental in causing this department to avoid adopting lengthy multi-session meeting programs.

SUPPLEMENTARY INFORMATION:

Received Certificate of Commendation, 1972 Metropolitan Life Awards, for Research in Accident Prevention. Published in *Accident Analysis and Prevention*, 4(1), 13-47, 1972 and *Journal of Traffic Safety Education*, 19(4), 5 & 39, 1972.

TITLE: Modifying Negligent Driving Behavior: Evaluation of Selected Driver Improvement Techniques, A Second Year Follow-up

AUTHOR(S): William C. Marsh

DATE: November 1973

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: Unnumbered

NTIS NUMBER: None

PROJECT OBJECTIVE:

To determine long-term effects of previously investigated treatments and provide decision information requested by the Legislative Analyst's Office.

SUMMARY:

Group Educational Meetings (GEM) were successful in reducing collision involvement during the one-year period after drivers were identified as "negligent operators" ($p < .10$, two tailed). The GEM was the only initial contact studied which was at all promising in terms of collision reduction, although its effects did dissipate during the second year. Cost-benefit results indicated that the GEM would produce a savings of between 3.5 and 7.5 million dollars per year for the people of California.

The report notes that a follow-up hearing still appears to be useful for those drivers who continue to accumulate convictions and collisions after their initial treatment (GEM, W/L, etc.). Such a follow-up hearing resulted in further collision reduction except in those cases where no initial treatment was administered (control group). This was interpreted as support for DMV's practice of progressing from mild to more severe actions when a driver continues to be involved in collisions and traffic convictions. As with the GEM, the effects of the follow-up hearing were of short duration--neither one showing effects lasting longer than a year.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Recommended further research was accomplished (see following reports); recommended policy avoiding individual hearings as the initial contact was adopted. The group educational meeting was retained as the department's first in-person negligent operator contact program.

SUPPLEMENTARY INFORMATION:

None.

TITLE: An Evaluation of Some Additional Factors Influencing the Effectiveness of Warning Letters

AUTHOR(S): William V. Epperson &
Richard M. Harano

DATE: May 1974

FUNDING SOURCE: Federal Highway
Administration

REPORT NUMBER: 45

NTIS NUMBER: PB-235724

PROJECT OBJECTIVE:

To determine the effectiveness of two types of warning letters and an informational pamphlet in reducing the subsequent collision and conviction records of pre-negligent drivers. An additional study objective was to determine the effectiveness of a follow-up reinforcement letter sent to collision- and conviction-free drivers. These hypotheses were suggested by an earlier warning letter study (McBride & Peck, Report #30). This study was designed to attempt replication of the previous results.

SUMMARY:

The results six months subsequent to treatment showed no significant treatment effects on convictions, but a positive pamphlet effect on collisions. The reality of the pamphlet effect was considered questionable due to a reversed trend in the second six months. The follow-up reinforcement analysis for collision- and conviction-free drivers showed no significant treatment effects on collisions. On convictions, however, there was a main effect attributable to type of warning letter as well as an interaction between type of warning letter, pamphlet condition, and follow-up reinforcement. The treatment effects were not significantly influenced by subject characteristics.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Based on these findings it was decided not to implement a reinforcement warning letter program or use different warning letters for different age-sex groupings.

SUPPLEMENTARY INFORMATION:

Published in *Accident Analysis and Prevention*, 7(4), 239-247, 1975.

TITLE: A Study on the Feasibility of Placing Selected Negligent Operators on Probation by Mail

AUTHOR(S): Beverly R. Sherman &
William V. Epperson

DATE: February 1977

REPORT NUMBER: Unnumbered

FUNDING SOURCE: Departmental Budget

NTIS NUMBER: None

PROJECT OBJECTIVE:

To estimate the potential cost savings if negligent operators had the option of waiving the hearing process and accepting probationary status by mail.

SUMMARY:

Nine hundred persons eligible for a negligent operator hearing were placed in one of two processes; half were entered into the experimental probation-by-mail process, and the other half entered a regular individual hearing process for comparison.

The study identified significant cost and personnel savings. The best estimate indicated that a potential annual cost reduction of \$254,000 (32%) was probable. These cost savings derived from the estimated reduction in negligent operator hearings (14,000) and corresponding reduction in staff (12.5 work years). It was emphasized, however, that the impact on highway safety of this procedure was not known. There was definitive evidence from the then-ongoing Post Licensing Control Reporting and Evaluation System that the Individual Hearing reduced accidents and convictions. Since the hearing itself provided a personal one-to-one interaction with the department, it seemed possible that elimination of this interaction could reduce or eliminate the effect of the program. It was therefore recommended that the traffic safety implications of this new process be scrutinized prior to any plans for implementation.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The recommendation to evaluate the traffic safety impact of the probation-by-mail process and an alternative known as "no-action hearing" was implemented.

SUPPLEMENTARY INFORMATION:

Studies completed on the effects of no action hearings and probation by mail are Garretson and Peck, Report #69, and Sherman and Ratz, Report #70.

TITLE: Driver License and Driver Improvement Program

AUTHOR(S): Ronald S. Coppin

DATE: September 1977

FUNDING SOURCE: Commonwealth Dept. of
Transport, Australia

REPORT NUMBER: Unnumbered

NTIS NUMBER: None

PROJECT OBJECTIVE:

The report attempts to conceptualize driver licensing programs into a series of administrative techniques which, if applied in a systematic fashion, should enhance road safety. The basic concept of the report is a recommended shift from a system of selection/enforcement to a system which is more diagnostic and/or educational in nature. This means a shift from doing things to drivers to a program which operates constructively for drivers.

SUMMARY:

The report points out the limitations of the driver license selection process as it is presently operated. The present process attempts to keep poor drivers off the road by denial of license. The present process also operates a points demerit system which, in most instances, automatically suspends or cancels licenses. The report suggests that this approach to driver license administration is no longer feasible in recognition of the fact that licensing is part of the larger social/legal/political system.

A model system is proposed which allows entry into the initial license process at an early age, then determines increasing proficiency in the early months of driving. This process would employ a classification system to establish sub-groups of drivers in need of further education and training. A series of driver improvement techniques for use with poor drivers is recommended. The implementation of these programs would, however, be dependent upon demonstrated effectiveness. Points demerits schemes would form the basis of identification of target populations replacing their present use of automatic sanctioning devices.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Unknown.

SUPPLEMENTARY INFORMATION:

This report was prepared for the Australian Department of Transportation by Mr. Coppin under a leave of absence arrangement from his position with the California Department of Motor Vehicles.

TITLE: The Effectiveness of License Suspension or Revocation for Drivers Convicted of Multiple Driving-Under-The-Influence Offenses (An Interim Report for the Evaluation of Senate Bill (SB) 330-Gregorio)

AUTHOR(S): Roger E. Hagen

DATE: September 1977

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 59

NTIS NUMBER: PB-278179/AS

PROJECT OBJECTIVE:

To assess the efficacy of using mandated license actions for multiple DUI offenders as accident countermeasures.

SUMMARY:

The analytical results of this study demonstrated that the use of mandated licensing actions in addition to fines and/or jail sentences for multiple DUI offenders had a more positive effect on traffic safety than the use of only fines and/or jail sentences. Both the magnitude and duration of the treatment effect associated with mandated license withdrawal were documented.

Statistically significant differences were found in the frequencies of subsequent reckless driving convictions, one-point convictions, total countable convictions, crashes, and personal injury and fatal crashes. The reported frequencies of convictions or crashes for the multiple DUI offender driver group who did not receive the mandated license suspension/revocation were, at a minimum, 30% greater than those for drivers who received the mandated licensing action.

The study was considered to provide a baseline for the conduct of later analyses addressing the traffic safety effectiveness of more customized pre-crash countermeasure approaches for multiple DUI offenders. Such alternatives might include alcohol abuse treatment, discretionary driver's license suspension/ revocation, the use of restricted drivers' licenses, the use of other health approaches, or any combination thereof. The first alternative was, at the time of the report, being studied as a component of an overall evaluation effort (Hagen et al., Report #68), while it was noted that the remainder should be considered potentially viable approaches worthy of future study.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Further related studies were conducted and are described in this section.

SUPPLEMENTARY INFORMATION:

Published in *Journal of Safety Research*, 10(3), 115-122, 1978 as "The Efficacy of Using Licensing Controls as a Countermeasure for Multiple DUI Offenders."

TITLE: Educational Approaches to Driver Improvement: An Experimental Evaluation with Negligent Drivers

AUTHOR(S): William C. Marsh

DATE: April 1978

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 66

NTIS NUMBER: PB-285541/AS

PROJECT OBJECTIVE:

To develop a group driver-improvement program that is more effective in reduction of accident/conviction rates and more cost-beneficial than the standard Group Educational Meeting (GEM).

SUMMARY:

A total of 17,662 negligent operators were randomly assigned to one of six programs or to a control group. One treatment was the Group Educational Meeting (GEM), three were modifications of the GEM, and two treatments were non-classroom programmed-learning techniques. One of the non-classroom programs provided an incentive for return of the homework and maintenance of a clean driving record.

Driving records were inspected for accidents and convictions during the year after treatment. Only the non-classroom homework-with-incentive program showed significantly fewer accidents than the control, and that reduction was restricted to the second six months after treatment. When data from additional GEM and control samples were combined with the original data, the GEM's accident rate was significantly below the control rate during the first six months, indicating that it was effective as an accident countermeasure. None of the experimental classroom programs were significantly (or even directionally) superior to the GEM in reducing accidents or convictions during the first six months. All treatments except the non-classroom homework without incentive were effective in reducing subsequent convictions.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The GEM was retained as the intermediate negligent operator treatment between warning letter and individual hearing. The department discontinued the use of the mandatory GEM notice which resulted in the suspension of drivers who failed to appear at GEMs.

SUPPLEMENTARY INFORMATION:

None.

TITLE: An Evaluation of Alcohol Abuse Treatment as an Alternative to Drivers License Suspension or Revocation (Final Report to the Legislature in Accord with Senate Bill (SB) 38-Gregorio)

AUTHOR(S): Roger E. Hagen,
Rickey L. Williams,
Edward J. McConnell, &
Charles W. Fleming

DATE: December 1978

REPORT NUMBER: 68

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic Safety Administration

NTIS NUMBER: PB-291534

PROJECT OBJECTIVE:

To assess the traffic safety impact of using the alcohol abuse treatment strategy as an alternative to license suspension or revocation; to assess the impact of treatment program participation or license suspension/revocation on a driver's life style; to develop guidelines or recommendations concerning the structure of a first-offender program based upon the results of the SB 330 evaluation and knowledge of the state-of-the-art; and to provide guidelines or recommendations concerning future program or evaluation needs.

SUMMARY:

A new judicial sentencing strategy for drivers convicted of driving-under-the-influence (DUI) offenses was created in California through passage of Senate Bill 330 (Gregorio, 1975). The legislation permitted drivers convicted of multiple DUI offenses to participate in a 12-month alcohol abuse treatment program in lieu of receiving mandatory suspension or revocation of their driving privilege. The 1975 legislation permitted a demonstration of the treatment sentencing strategy in a maximum of four California counties, beginning in January, 1976. The demonstration effort was legislatively refined and extended statewide effective January 1, 1978 (SB 38, Gregorio, 1977; SB 1458, Gregorio, 1978).

The 12-month alcohol abuse treatment program consisted of: (1) close and regular supervision of participants, including face-to-face interviews at least once every other calendar week, (2) a variety of direct treatment services for problem drinkers/alcoholics, or the capability of referring them to such treatment, (3) an opportunity for a driver to be referred to a program only once within a four-year timeframe, and (4) the capability of monitoring and supervising participants referred to outside agencies.

The report presents evidence that license suspension or revocation has a more positive traffic safety impact than does participation in the alcohol abuse treatment program. Further, it shows that treatment program participation and the imposition of a licensing control have similar impact on a driver's life style. Finally, the implications of these findings on first-offender programs are discussed.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

In 1981, the California Legislature enacted Chapter 940, amending several Vehicle Code Sections dealing with drinking drivers. The use of restrictions on the driver's license was embodied in this legislation.

SUPPLEMENTARY INFORMATION:

A critique of the report by Griffith Edwards appeared in *Accident Analysis and Prevention*, 11, 311-312, 1979. The traffic safety findings were presented by Roger Hagen at the National Alcoholism Forum, Washington, D.C., 1979.

The traffic safety findings were published as "The Traffic Safety Impact of Alcohol Treatment as an Alternative to Mandated Licensing Controls" by Hagen, Williams, and McConnell in *Accident Analysis and Prevention*, 11, 275-291, 1979.

TITLE: The Effects of "No Action" Negligent Operator Hearings as an Alternative to Hearings Resulting in Probation

AUTHOR(S): Marilee E. Garretson &
Raymond C. Peck

DATE: June 1979

REPORT NUMBER: 69

FUNDING SOURCE: Departmental Budget

NTIS NUMBER: PB80-101686

PROJECT OBJECTIVE:

To evaluate the effectiveness of negligent operator hearings in which probation is replaced by the imposition of "no action."

SUMMARY:

The main objective of this study was to evaluate the effectiveness of negligent operator hearings in which probation is replaced by the imposition of "no action." The sample consisted of 6,489 drivers who attended negligent operator hearings. Of these drivers, 1,247 (19%) were considered high risk and were screened from the no-action hearing program. The remaining 5,242 drivers were randomly assigned to either the group that received license status action as recommended (standard treatment) or the group that had no action taken on their licenses (experimental treatment).

The results indicated that no statistically significant driver record differences existed between the randomly assigned groups, either 12 months prior, or 12 months subsequent, to treatment. However, the possibility that removal of departmental actions from the individual hearing setting may have had a detrimental effect could not be entirely dismissed. It was noted that the societal savings associated with the observed (nonsignificant) decrease in fatal and injury accidents, for those drivers not receiving actions, might result in a positive net financial impact for an implemented no-action program.

The high-risk group was examined in an attempt to determine if the high-risk screening criteria used in the study were valid. An analysis of the characteristics of the nonhigh- and high-risk groups suggested that the high-risk group did not, in fact, have a higher accident expectancy than the nonhigh-risk group.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The results of this study were released simultaneously with the results of the probation-by-mail study (Sherman & Ratz, Report #70). Together, they examined two logically complementary alternatives to the individual-hearing process. Since neither of the alternatives appeared to be detrimental in terms of traffic safety, and the probation-by-mail alternative offered greater immediate departmental cost savings, it was recommended that probation-by-mail (PBM) be implemented rather than the no-action hearing. PBM was implemented statewide in July 1979. In 1982, evidence of declining effectiveness led to its abandonment.

SUPPLEMENTARY INFORMATION:

See Sherman and Ratz, Report #70.

TITLE: An Evaluation of Probation-by-Mail as an Alternative to Mandatory Hearing Attendance for Negligent Operators

AUTHOR(S): Beverly R. Sherman &
Michael Ratz

DATE: July 1979

REPORT NUMBER: 70

FUNDING SOURCE: Departmental Budget

NTIS NUMBER: PB80-101694

PROJECT OBJECTIVE:

To evaluate the feasibility and traffic safety implications of placing negligent operators on probation by letter without the subject's being scheduled for a hearing.

SUMMARY:

Negligent operators eligible for an informal hearing were randomly assigned to either probation-by-mail ($n = 3,883$) or regular individual hearings ($n = 3,868$) after high-risk drivers had been screened out for normal contact ($n = 6,148$). A six-month follow-up of driving records indicated that there were no significant differences in the subsequent accident rates of the two randomly assigned groups, although drivers in the probation-by-mail group did have significantly more convictions, with a resultant increase in probation violator hearings. Those drivers who were screened out as being high risk and who therefore received the standard hearing did not differ significantly from nonhigh-risk drivers who received a hearing with regard to either subsequent accidents or convictions. A cost-benefit analysis indicated a .67 probability of a positive net financial impact for an implemented probation-by-mail program.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

This study and the no-action hearing study examined two logically complementary alternatives to the individual hearing and group meeting driver improvement programs. Because there were no clear-cut accident effect differences between the two experimental programs, and probation-by-mail resulted in a greater budgetary savings, the implementation of probation-by-mail was recommended. The program was implemented statewide in July 1979. In 1982, evidence of declining effectiveness led the department to restructure its post licensing control system.

SUPPLEMENTARY INFORMATION:

For related California DMV studies, see Marsh, Report #94; Peck and Healey, Report #155; and *A New Approach to Treatment and Control of the Negligent Operator* by the California Department of Motor Vehicles, Division of Drivers Licensing, 1981.

TITLE: The Effectiveness of Accredited Traffic Violator Schools in Reducing Accidents and Violations

AUTHOR(S): Raymond C. Peck,
Shara Lynn Kelsey,
Michael Ratz, &
Beverly R. Sherman

DATE: September 1979

REPORT NUMBER: 71

NTIS NUMBER: PB80-132574

FUNDING SOURCE: Departmental Budget

PROJECT OBJECTIVE:

To evaluate the effects of accredited traffic violator schools (TVS) on traffic safety.

SUMMARY:

The effect on subsequent driving record of requiring traffic violators to attend classes at accredited schools (TVS) rather than face the usual penalty measures was evaluated. No significant difference in subsequent mean number of accidents or convictions was found between those subjects attending classes and those given waivers of attendance; additional analyses of public versus privately owned schools, and single eight-hour versus several shorter sessions, produced no significant evidence of interactions. Generalization was hampered by the selective nature of the schools studied; 60% of the courts contacted refused to allow subjects assigned to traffic violator schools to be placed in a no-school control group. Thus, the study was restricted to 129 schools utilized by the 52 courts that agreed to cooperate. The authors recommended either discontinuing the DMV accreditation program or upgrading standards and improving the monitoring process, including a requirement that all TVS assignments be reported to DMV.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

A TVS Ad Hoc Committee was established, and presented a report to the Director in November, 1979. Issues, possible solutions, and problems were outlined. Two recommendations were made: Repeal 1660-61 CVC (DMV accreditation), and seek legislation to curtail the abuse of traffic violator diversion programs by limiting multiple attendance and by requiring that all referrals to TVS be reported to DMV. In 1982, the legislature passed legislation (SB 1455-Davis) requiring courts to report all TVS dismissals to DMV, subject to the requirement that the information be used by DMV for research purposes only and only divulged to requesting courts. This legislation was enacted into statute effective January 1, 1983.

SUPPLEMENTARY INFORMATION:

Journal of Safety Research, 12(2), 68-77, Summer 1980.

TITLE: Driver Improvement: A Survey of Personnel, Procedures and Work Climate

AUTHOR(S): Roger E. Hagen &
Rickey L. Williams

DATE: September 1979

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 72

NTIS NUMBER: None

PROJECT OBJECTIVE:

To survey factors which may have an influence on the outcome of the probation violator hearing project.

SUMMARY:

A mail-back survey was distributed to all driver improvement analysts (DIAs); 169 questionnaires were returned (85% response). Subanalyses which identified DIAs as management or staff and as field or headquarters personnel were conducted.

The survey indicated that completing and reviewing hearing reports occupied a greater portion of the workload than was anticipated. There were some differences of opinion regarding the need for drastic change in the driver improvement program.

The survey form defined work climate in terms of status, human relations, physical work setting, reward and recognition, responsibility and upward mobility. Survey results showed extreme dissonance in the existence and desirability of these elements. The perceived lack of these work satisfiers and motivators, while virtually the same for headquarters and field personnel, was less for managers than for staff. The report recommended that a concerted work-enrichment effort take place.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

A task force was formed to assess the issues raised by the report and to make recommendations regarding the organization of the driver improvement program, program management, and procedural support. The task force submitted an internal report and recommendations to management.

SUPPLEMENTARY INFORMATION:

None.

TITLE: A Review of C. D. Robinson's "The Operation of Drivers License Disqualification as a Sanction"

AUTHOR(S): Raymond C. Peck

DATE: December 1979

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: Unnumbered

NTIS NUMBER: None

PROJECT OBJECTIVE:

To prepare for the journal of Accident Analysis and Prevention a critical analysis and review of an Australian monograph on the effectiveness of license suspensions.

SUMMARY:

The reviewed monograph concluded that license suspensions are of very limited effectiveness in controlling the driving of deviant drivers. Although not necessarily disagreeing with the conclusion, the review points out a number of limitations in the study and the author's reasoning process. These limitations are summarized as follows:

- (1) The study was limited to self-report questionnaire information of unknown validity. Only 37.2% of the sample responded to the survey.
- (2) More valid results could probably have been achieved by surveying the drivers after their license privileges had been reinstated.
- (3) The study implicitly assumed that the incidence of driving while suspended is the most important indicator of effectiveness. The reviewer argued that accident frequency during suspension is the ultimate measure of effectiveness and that suspension could substantially decrease accidents even though the incidence of driving during suspension was substantial.
- (4) The study only addressed the effects of suspension on suspended drivers. It is possible that recognition of the existence of license suspension promotes lawful driving through a general deterrent effect on the entire driving population.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Not applicable.

SUPPLEMENTARY INFORMATION:

The review was published in *Accident Analysis and Prevention*, 11(4), 313-315, December, 1979.

TITLE: Suspension and Revocation Effects on the DUI Offender

AUTHOR(S): Roger E. Hagen,
Edward J. McConnell, &
Rickey L. Williams

DATE: July 1980

REPORT NUMBER: 75

FUNDING SOURCE: Departmental Budget

NTIS NUMBER: PB80-226137

PROJECT OBJECTIVE:

(1) To assess the ability of first, second, and third DUI offenders to avoid future DUI convictions or traffic accidents; (2) to survey drivers being reinstated following a DUI suspension or revocation in order to gather information concerning admission of driving during the action, transportation alternatives used while under the licensing action, and reactions of the driver to both the action and the changes in life style which resulted thereby; and (3) to assess the incidence of driving while under licensing action as reported by drivers themselves, and by the presence of any driver record update.

SUMMARY:

The first objective was met by a survival rate analysis. All drivers who received a DUI conviction during 1974 and received the appropriate licensing actions were identified in 1979. A 10% sample of these records (1,769 first offenders, 1,808 second offenders, 911 third offenders) was then analyzed. The proportions of drivers surviving (not receiving an accident or DUI conviction) were collected and tested for four years. First offenders, who had no licensing action, were more likely to accrue a subsequent DUI conviction during the first year of the 4-year follow-up. A superior survival rate for second offenders during year one probably reflected the impact of the 12-month license suspension that existed during that time frame. By the end of the third year, the DUI survival rates of first and second offenders were virtually identical. Third offenders had the lowest DUI survival rate at the end of three years even though they were under a 3-year license revocation. Accident survival rates of first offenders were the worst during the first year. Otherwise, the accident survival rates were remarkably similar across groups and years. Third offenders showed superior accident survival during the final year of licensing action (year three) but a similar pattern was not evidenced in their DUI recidivism.

To meet the second objective, survey questionnaires were mailed to 2,500 drivers being reinstated from mandatory DUI suspensions (12 months) or revocations (36 months). The reported patterns of driving prior to the licensing action (for those with no self-admission during the action) and during the licensing action (by those admitting so) included predominantly driving to and from work on city streets, during daylight hours. Drivers who did not admit driving reported reliance on public transportation, friends or family to get to work, and on family members for shopping. Of those who admitted driving during the licensing action, 74% drove more than 20 times. Over 65%, however, reported reducing their driving exposure, with 29% reporting up to a 75% reduction. A majority of all admitted drivers said they were more careful. Drivers generally perceived the mandatory licensing actions as fair, although many stated that economic difficulties, changes in life style, or inconvenience resulted. Many expressed a need for a limited driving privilege to maintain employment.

Drivers generally had an accurate impression of the fines and jail sentences which result from repeat DUI convictions. More of those who did not report driving believed that a future conviction while suspended or revoked would result in license cancellation.

Finally, a driving incidence analysis was conducted using two methodologies. Survival analyses indicated that 32% of suspended second offenders and 61% of revoked third offenders acquired some form of driver record update. The driver survey, on the other hand, produced admission rates ranging from 55% (drivers with a license suspension who did not acquire additional driver record updates) to 84% (revoked drivers with at least one record update). In general, 80% of all those with a record update admitted driving during the licensing action while, of all drivers admitting driving, only 49% showed some record update.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Subsequent to publication of this report, the legislature passed AB 541. Some aspects of that bill were congruent with the recommendation of this and two other previously reported studies by Hagen et al.

SUPPLEMENTARY INFORMATION:

Two articles were published in *Accident Analysis and Prevention*, 16(5/6), 333-388 and 339-350, 1984. The first, entitled a driving record analysis of suspension and revocation effects on the drinking-driving offender. The second, a survey of suspension and revocation effects on the drinking-driving offender, both by Williams, Hagen, and McConnell.

See Hagen, R. E., Williams, R. L., & McConnell, E. J. "Effectiveness of license suspensions or revocation for drivers convicted of multiple driving under the influence offenses—An overview of three studies," *Proceedings of the Symposium on Traffic Safety Effectiveness (Impact) Evaluation Projects*, National Highway Traffic Safety Administration and National Safety Council, Rosemont, Illinois, May 19-21, 1981, and Hagen, R. E., Williams, R. L., & McConnell, E. J., "Effectiveness of license suspensions or revocation for drivers convicted of multiple driving under the influence offenses—An overview of three studies," *Traffic Safety Evaluation Research Review*, 1(5), 10-29, 1982.

TITLE: The Sanctioning Process and the DUI Offender

AUTHOR(S): Roger E. Hagen

DATE: January 1981

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic Safety Administration

REPORT NUMBER: Unnumbered

NTIS NUMBER: None

PROJECT OBJECTIVE:

To increase knowledge and awareness of the state-of-the-art of drunk driver sanction effectiveness.

SUMMARY:

This paper presents an overview from a large number of studies on traffic sanction models and the impact of fines, jail, license suspension and license restriction on the subsequent driving records of DUI (driving under the influence of alcohol/drugs) offenders. Firm conclusions on the impact of fine levels and prison were not possible because of inconsistent findings and methodological limitations in most of the studies.

The paper notes that virtually nothing is known about license restriction, although one relatively well-designed study reported positive results; several studies have demonstrated improved driving records following license suspension. Although most suspended DUI drivers admit to driving during suspension, a California survey of suspended drivers indicated that the majority reported significant reductions in mileage and that they drove more carefully to avoid detection.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Not applicable.

SUPPLEMENTARY INFORMATION:

This paper was published in *Abstracts and Reviews in Alcohol and Driving*, 2(1), 1-5, January, 1981.

See Tashima and Peck, Report #95, for an evaluation of the effects of license restriction for DUI offenders.

TITLE: Review of "An Appraisal of San Diego County SB 38 Participant DUI Recidivism and Traffic Accident Involvement"

AUTHOR(S): Raymond C. Peck

DATE: October 1981

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: Unnumbered

NTIS NUMBER: None

PROJECT OBJECTIVE:

To communicate to the drunk driving rehabilitation community some evaluation defects in the above study which limit the conclusions that can be reached, and to increase knowledge of evaluation research methodology.

SUMMARY:

In the above-referenced paper, by Ryan and Vasquez, the authors concluded that the alcohol rehabilitation treatment provided by the San Diego convicted drinking driver project was superior to license suspension in reducing recidivism. The reviewer pointed out that methodological flaws in the evaluation precluded drawing any conclusions about the relative efficacy of the two countermeasures. Among the defects were: (1) self-selection bias caused by dropping program failures from data, and (2) comparing programs from different time periods and geographical areas. The review also pointed out that the evaluators failed to recognize that the great majority of persons in the suspension group had their licenses reinstated prior to comparing the two programs. Thus, even if the rehabilitation group really had lower recidivism rates, this fact would not be evidence against the efficacy of license suspension during the suspension period.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Ryan and Vasquez acknowledged the validity of some of the criticisms but pointed out that their study was not intended to be a definitive evaluation. The authors concurred with the reviewer's recommendation for more rigorous SB 38 program evaluations and, in addition, recommended that DMV initiate a statewide SB 38 program evaluation system.

SUPPLEMENTARY INFORMATION:

This article was published in *Abstracts and Reviews in Alcohol and Driving*, 2(10), October 1981.

TITLE: An Evaluation of Three Alternative Formats for Probation Violation Hearings

AUTHOR(S): Rickey L. Williams &
Roger E. Hagen

DATE: December 1981

FUNDING SOURCE: Office of Traffic Safety

REPORT NUMBER: 77

NTIS NUMBER: PB82-181603

PROJECT OBJECTIVE:

To develop and evaluate new formats for negligent operator probation violator hearings which incorporate behavior modification principles and a client caseload-scheduling approach.

SUMMARY:

The purpose of the project was to improve the traffic safety impact and cost-benefit of the negligent operator probation violator hearing. The three hearing formats evaluated varied in several aspects, including use of license restrictions (rather than suspension or revocation), hearing duration, negotiation and contingency contracting, and caseload assignment. The two experimental programs differed primarily in the timing of the restriction removal, one employing a single fixed-interval restriction and the other a sequential multiphase strategy.

Project-trained driver improvement analysts (DIA) conducted the fixed-restriction and sequential-restriction hearings at 44 out of 150 hearing points statewide, while standard hearings at these points were conducted by other DIAs. Drivers were assigned randomly to hearing format.

The licensing actions used at the project entry hearing were more liberal than anticipated in all hearing formats. The standard hearing format was superior to the others both in terms of overall traffic safety impact and net cost benefits. The differences between hearing formats in fatal and injury accidents and countable convictions tended to favor the standard format. Implementation of either alternative format would probably ($p = .80$) result in a decline in benefits relative to costs.

The report makes recommendations regarding alternatives to the standard probation violator hearing, the most notable of these being the so-called single hearing strategy. Continued use of license restrictions, where effective, is also recommended. Limitations in the effectiveness of the behavior modification paradigm within the traffic safety setting are discussed.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Recommendations for increasing the cost-benefit of the negligent operator hearing were mandated into the department's revamping of the negligent driver program. Specifically, the department was to make greater use of license suspensions and take a greater number of actions without first scheduling a hearing.

SUPPLEMENTARY INFORMATION:

An interim report was published as DMV Report #72 by Roger E. Hagen and Rickey L. Williams, "Driver Improvement: A Survey of Personnel, Procedures, and Work Climate."

A shortened version of the report was published in the *Journal of Safety Research*, 15(3), 97-105, 1984.

TITLE: Post Licensing Control Reporting and Evaluation System (PLCRES): Negligent Operator Program Costs and Effectiveness

AUTHOR(S)

Status Report #1:	Daniel Kadell, William Howe, John Magistad, Ph.D., & Raymond C. Peck	<u>DATE:</u> October 1976 <u>NTIS NUMBER:</u> PB91-104745
Status Report #2:	Daniel Kadell, Raymond C. Peck, William Howe, & William Epperson	<u>DATE:</u> March 1977 <u>NTIS NUMBER:</u> PB90-272899
Status Report #3:	Daniel Kadell, Raymond C. Peck, & William Howe	<u>DATE:</u> March 1978 <u>NTIS NUMBER:</u> PB90-272907
Status Report #4:	Daniel Kadell & Raymond C. Peck	<u>DATE:</u> February 1979 <u>NTIS NUMBER:</u> PB-295082/AS
Status Report #5:	Daniel Kadell, Raymond C. Peck, Steve Fong, & William C. Marsh	<u>DATE:</u> April 1980 <u>NTIS NUMBER:</u> PB81-154262
Status Report #6:	David W. Carpenter & Raymond C. Peck	<u>DATE:</u> December 1980 <u>NTIS NUMBER:</u> PB81-154270
Status Report #7:	Philip Wootton, David W. Carpenter & Raymond C. Peck	<u>DATE:</u> December 1981 <u>NTIS NUMBER:</u> PB90-272915

FUNDING SOURCE: Office of Traffic Safety
(original development), departmental budget
thereafter

PROJECT OBJECTIVE:

To implement and maintain an automated on-line evaluation system for monitoring the effectiveness of negligent-operator programs.

SUMMARY:

This series of reports resulted from an ongoing evaluation system designed to continuously monitor costs and effectiveness of the Department of Motor Vehicles' post-licensing control and

driver improvement programs. The effort was originally partially supported through a grant from the Office of Traffic Safety. For the four treatments being evaluated (Warning Letter - W/L, Group Educational Meeting - GEM, Negligent Operator Hearing - I/H, and Probation Violator Hearing - P/V), treatment and control group subjects were selected randomly. The control group subjects did not receive treatment, and the two groups were subsequently compared to determine the effect of treatment on accidents, convictions, progression through the negligent operator program, monetary societal losses prevented by treatment, and DMV funds spent on treatment.

The first PLCRES Status Report indicated that all of the treatments produced a significant reduction in convictions; the GEM and I/H produced statistically significant reductions in accidents but the W/L and P/V did not. However, the latter two programs did have a directionally positive effect, since in both cases the treatment group had fewer accidents. In cost-benefit terms, however, the small (non-significant) accident reduction produced by the W/L was sufficient to generate substantial net benefits, since the cost of the W/L program was very low. GEM and I/H, in addition to producing significant accident reductions, resulted in substantial net benefits. Only P/V, with a rather high unit cost and a small (non-significant) accident reduction, failed to generate net benefits.

The second PLCRES Status Report found the same pattern, with the GEM and I/H producing statistically significant accident reductions; although the treatment groups in W/L and P/V accrued fewer accidents, the observed treatment-control differences were not statistically significant. Again, each treatment showed a statistically significant reduction in convictions. The cost-benefit results in this report were also similar to those reported above, in that all programs other than P/V generated substantial net benefits. Since the number of accidents saved per 1,000 drivers treated in GEM had increased substantially during the second reporting period, GEM showed a substantial increase in net benefits over that found previously.

Because PLCRES Status Report #3 found suggestive evidence of bias in the W/L and P/V groups, analysis of covariance was used to evaluate the significance of the observed accident reductions. Using this technique, all programs except GEM demonstrated significant reductions in accidents. (GEM had a directionally positive effect, $p < .13$.) The analysis of covariance results indicated that a bias operated in the W/L groups, and that it tended to reduce the effect size observed. The observed bias in the P/V groups was so small as to have no practical effect. Using the survival curve method of analysis (used in both previous reports) all programs produced a significant reduction in convictions, and all but the W/L demonstrated significant accident reductions. In terms of cost-benefit considerations, all programs except P/V were shown in this report to generate considerable net benefits.

The fourth PLCRES Status Report confirmed the previous findings and trends. All four programs significantly reduced convictions and all except the W/L significantly reduced accidents ($p < .02$). Again, the only program not to be clearly cost-beneficial was the P/V program. However, for the first time, the P/V program showed a (slight) positive cost-benefit result on one of the cost-benefit indices. A decision was made to delete the P/V component from PLCRES and to explore improvements as part of another study (Williams and Hagen, 1981).

The fifth PLCRES Status Report reported on the W/L and GEM only. Both programs significantly reduced convictions and were projected to be cost-beneficial. However, the accident reduction estimates were not statistically significant for either treatment. There was suggestive evidence that the voluntary GEM (adopted in December, 1977) was less effective at reducing accidents than was the mandatory GEM (with license suspension for non-attendance). The I/H and P/V levels were not shown. The I/H had been largely replaced by a new treatment known as Probation by Mail (PBM; see Sherman & Epperson, "A Study on the Feasibility of Placing Selected Negligent Operators on Probation by Mail").

The sixth PLCRES Status Report reported on the W/L, and on the PBM implementation. Results for W/L were consistent with prior findings. For the PBM implementation, drivers were categorized as "nonhigh-risk" or "high-risk" according to their prior driving records. High-risk drivers were assigned to I/H or PBM, with results indicating a significant increase in convictions and a nonsignificant increase in accidents for the PBM group. However, PBM had substantially lower unit costs, so cost-benefit results favored PBM. Benefits did not exceed costs for nonhigh-risk drivers who were assigned to PBM, compared to a no-treatment control group.

The seventh PLCRES Status Report included treatment and control comparisons for the W/L, GEM, and nonhigh-risk PBM conditions. The results showed no significant effects on accidents, but the W/L and nonhigh-risk PBM conditions significantly reduced convictions. For the first time since its inception, the GEM condition did not reduce convictions. For high-risk subjects, PBM and I/H were directly compared with each other instead of with controls. The results showed no significant accident or conviction effect differences, indicating that high-risk PBM is as effective as the more costly I/H. The cost-benefit analysis showed that W/L benefits exceeded costs. The high-risk PBM condition was also found to be cost-beneficial when compared to I/H. However, the GEM and nonhigh-risk PBM treatments were not cost-beneficial. A historical comparison of all status reports revealed a reduction in treatment effectiveness following Status Report #4, with the effect on GEM being the most pronounced.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Because of the reduction in effectiveness and cost-benefits, the department informed the Legislative Analyst's Office that it was restricting the negligent operator program in an attempt to reduce costs and increase benefits. The new program was developed under the acronym NOTS (Negligent Operator Treatment System). No further PLCRES status reports were produced. A new, ongoing evaluation system was developed for NOTS, and those results were published in another series of ongoing reports.

SUPPLEMENTARY INFORMATION:

Progress Report to the Legislature, Post Licensing Control Reporting and Evaluation System, November 1, 1973, Sandreno A. Marchi, Project Leader; additional progress reports dated April 30, 1974 and December 1, 1975; Report of Implementation, May 31, 1976; Summary Report Volume I, August 30, 1976; Technical Report Volume II, August 30, 1976 with Sandreno A. Marchi as project leader.

Peck, R. C., Toward a dynamic system of driver improvement program evaluation. *Human Factors*, 18(5), 493-506, 1976.

Peck, R. C., & Kadell, D. J. The California post-licensing control reporting and evaluation system. *Proceedings of the symposium on traffic effectiveness (impact) evaluation projects*. National Highway Traffic Safety Administration and National Safety Council. Rosemont, Illinois, May 19-21, 1981.

Received NHTSA's Award of Merit in recognition of contribution to *Traffic Safety Evaluation Research Literature*, 1982.

Peck, R. C., & Kadell, D. J. California's post-licensing control reporting and evaluation system--A summary of the first three years of results. *Traffic Safety Evaluation Research Review*, 2(2), 7-21, 1983.

TITLE: An Evaluation of the Alcohol Reexamination Program for Drivers with Two Major Traffic Convictions

AUTHOR(S): Daniel J. Kadell &
Raymond C. Peck

DATE: September 1982

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 83

NTIS NUMBER: PB83-126649

PROJECT OBJECTIVE:

To evaluate the traffic safety impact of a reexamination designed to detect and treat drunk driving among drivers with two "major violations" who have escaped license sanctions and other countermeasures. Major violations comprise the more serious traffic violations including reckless driving, hit-and-run, and driving under the influence of alcohol or drugs (DUI).

SUMMARY:

The main objective of this study was to evaluate the effectiveness of a reexamination for drivers who accumulate two major violations within a 3-year period, but who were not otherwise treated by the Department of Motor Vehicles (DMV). Because major violations often involve alcohol even when the conviction is for a non-DUI offense, the reexamination was designed to evaluate the role of alcohol and to deter subsequent impaired driving through tailored license control actions.

The sample of 12,000 drivers was randomly divided into reexamination and control (no reexamination) groups.

Results indicated that the information gathered at the reexamination was moderately predictive of subsequent alcohol-involved violations, slightly more so than driving record information alone. Among drivers attending the reexamination, the two most frequent outcomes were no action and license probation; license suspension or revocation was rarely used. A substantial reduction in traffic convictions was attributable to the reexamination. The reexamination group had a lower rate of injury accidents and total accidents, but this latter difference did not reach statistical significance. There was no evidence that the effect of treatment was greater on alcohol-related accidents or convictions than on those not obviously alcohol-related. Based on the sample estimate of accidents prevented, the reexamination was projected to be more likely cost-beneficial than not.

Comparisons of drivers for whom no action, probation, or suspension was imposed suggested that license suspension would be a more effective countermeasure than the license probation commonly used in the reexamination. Regarding the diagnostic function of the reexamination, those major convictions without evidence of alcohol involvement were associated with as high an accident risk level as were majors with evidence of alcohol involvement. This equivalence of risk levels was seen as an argument for a blanket

countermeasure program rather than for countermeasures tailored on the basis of a diagnosis of alcohol involvement.

It was recommended that mandatory license suspension be used in place of the reexamination for drivers with two major convictions, regardless of alcohol involvement.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The recommendation to seek legislation for mandatory license suspension authority was largely accomplished with implementation of the administrative per se law (SB 1623, Lockyer) in July 1990.

SUPPLEMENTARY INFORMATION:

A summary of the study is also contained in *Proceedings on the Third Annual Symposium on Traffic Safety Effectiveness (Impact) Evaluation Projects*, National Highway Traffic Safety Administration and National Safety Council, Chicago, Illinois, May 16-18, 1983.

TITLE: Intervention Strategies for Accident-Involved Drivers: An Experimental Evaluation of Current California Policy and Alternatives

AUTHOR(S): Clifford J. Helander

DATE: June 1983

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 85

NTIS NUMBER: PB83-262535

PROJECT OBJECTIVE:

To evaluate standard and alternative strategies for selecting and treating accident-involved drivers in California.

SUMMARY:

The DMV's standard criteria for selecting accident-involved drivers for treatment (involvement in a fatal accident or three accidents within one year) were contrasted with an expanded selection strategy which included convictions as well as accidents as criteria for selection. The standard reexamination treatment was compared to two alternative treatments, an accident-avoidance session and a mailed pamphlet/self-administered test.

The 6,867 drivers selected by the standard criteria were randomly assigned either to the reexamination, one of the two alternative treatments, or to a no-contact control condition. The 24,156 drivers selected by the expanded criteria were randomly assigned to one of the two alternative treatments or to a no-contact control condition.

Comparisons between the standard and expanded selection criteria showed that drivers selected by the standard criteria were significantly affected by treatment, while most drivers selected by the expanded criteria were not. However, subsequent analyses on expanded criteria drivers revealed that those "most like" standard-criteria drivers (those with a minimal conviction history) were also significantly affected by treatment.

The accident-avoidance session was shown to be the most effective treatment for standard-criteria drivers. The only treatment showing a significant effect for any segment of the expanded-criteria sample was the pamphlet/self-test. Treatment effects were statistically significant ($p < .02$), with the standard-criteria accident-avoidance session group and the "minimal conviction" pamphlet/self-test group both experiencing a 23% accident reduction during the subsequent one-year period.

The most effective treatments were extremely cost-beneficial, producing unit accident cost savings (accident cost savings minus treatment costs) ranging from \$206 - \$244 per contact.

It was recommended that: (1) the accident-avoidance session replace the reexamination as the DMV's operational intervention for standard-criteria drivers, and (2) the pamphlet/self-test treatment be implemented for expanded-criteria drivers with minimal conviction histories.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The accident-avoidance session replaced the reexamination as the DMV's operational intervention for standard-criteria drivers in November 1983. Implementation of the pamphlet/self-test treatment for "minimal conviction" expanded-criteria drivers was still under consideration as of this writing.

SUPPLEMENTARY INFORMATION:

Published in the *Journal of Safety Research*, 15(1), 23-40 1984. This paper was presented at the *Fourth Symposium on Traffic Safety Effectiveness (Impact) Evaluation Projects*, National Safety Council, Chicago, IL, June 26-28, 1985.

TITLE: The Traffic Safety Impact of California's New Drunk Driving Law
(AB 541)--An Evaluation of the First Nine Months of Experience

AUTHOR(S): Raymond C. Peck

DATE: August 1983

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: 87

NTIS NUMBER: PB84-104629

PROJECT OBJECTIVE:

To determine if the new drunk driving law (AB 541) had any impact on the incidence of alcohol-related traffic accidents.

SUMMARY:

This study examined the impact of AB 541 by comparing monthly accident trends before and after the bill's implementation (January 1982). Monthly counts of the following injury and fatal accident types were obtained from the CHP for January 1977 through September 1982: late-night accidents, daytime accidents, HBD accidents, non-HBD accidents, and late-night single-vehicle accidents involving male drivers. The rationale underlying the statistical analysis was that, if effective, AB 541 should have a significantly greater impact on alcohol-oriented accidents (e.g., HBD, late night, etc.) than on nonalcohol accidents (non-HBDs, day accidents, etc.). Using log-linear contingency table analyses, the study found significantly greater reductions in the following categories: HBD fatalities, HBD injuries, late-night injuries, and late-night single-vehicle injury accidents involving males. Reductions ranged from 7-12% and tended to decline toward the latter part of the 9-month post-AB 541 period. However, there was still evidence of a decline in HBD fatalities at the end of the 9-month period. It was, therefore, concluded that AB 541 resulted in a reduction in alcohol-involved accidents but that a longer-term follow-up was needed to establish the duration of the impact.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

A longer-range evaluation of the law's impact was in progress at the time of writing (see below).

SUPPLEMENTARY INFORMATION:

See Tashima and Peck, Report #95 and Rogers and Schoenig, Report #123 for more current information.

TITLE: Analysis of DUI Processing from Arrest Through Post-Conviction Countermeasures
(Volume 1 of "An Evaluation of the California Drunk Driving Countermeasure
System")

AUTHOR(S): M. W. Perrine

DATE: March 1984

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 89

NTIS NUMBER: PB84-216217

PROJECT OBJECTIVE:

(1) To develop process flow charts for the whole DUI system, depicting all elements and decision points concerning drivers, abstracts, and license actions involved in the reporting system, both before and after new legislation (AB 541) became effective on January 1, 1982; (2) to describe the whole DUI system from the point of arrest to the driver record file, both before and after AB 541; (3) to identify areas or sources of system inefficiency or modes of circumvention of specified provisions, especially in the post-AB 541 system; and (4) to develop alternate solutions and associated recommendations.

SUMMARY:

This study focused on the countermeasure system for controlling the drinking driver problem in California. It was specifically concerned with describing and analyzing all aspects of the system for processing motorists involved in driving under the influence of alcohol (DUI), from the point of arrest through the charging, convicting, sentencing, and treating, to the disposition-recording and action at the Department of Motor Vehicles (DMV).

An interorganizational task force was formed to accomplish the objectives. It represented all major constituencies in the DUI countermeasure system: law enforcement agencies; prosecutors; municipal, superior, and juvenile courts; program/service providers; state and county alcohol program administrators; probation officers; and the DMV. Since major new DUI legislation (especially AB 541) became operative in January 1982 just as this task force became operational, it was decided to describe and analyze the older system as well as the new.

The report is primarily the product of the task force activities and contributions. It meets the first three objectives (above), both for the pre-1982 and post-1982 DUI systems. The fourth objective was addressed in a related study within the same project series (Peck, Report #112).

The report serves as an overview of the DUI countermeasure system as it was analyzed in 1982 and 1983. Changes in this system which occurred after the task force concluded its activities are also described briefly.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

See below.

SUPPLEMENTARY INFORMATION:

The policy recommendations from all volumes of the study are synthesized in report #112 (Peck, 1987).

TITLE: The Traffic Safety Impact of Driver Improvement Countermeasures Targeting 55-MPH Speed Limit Compliance

AUTHOR(S): Daniel J. Kadell

DATE: March 1984

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 91

NTIS NUMBER: PB84-212729

PROJECT OBJECTIVE:

The overall objectives of this study were twofold: (1) to evaluate a speed-oriented home instruction/point reduction incentive program (HI/PRI) and a speed education meeting (SEM) as alternatives to the group educational meeting (GEM) for negligent operators, and (2) to evaluate the effects of a modified speed compliance HI/PRI program on repeat speed offenders.

SUMMARY:

As authorized by Assembly Bill 2505 (1980), the Department of Motor Vehicles (DMV) implemented and evaluated a pilot driver improvement program involving the withholding ("masking") from public inspection of one conviction from the driving record of qualifying drivers. All drivers in the pilot program were multiple violators subject to driver improvement intervention. To qualify for masking, the driver had to complete and return a mailed self-administered test and remain free of traffic convictions and accidents for a period of 6 months. The "Home Instruction/Point Reduction Incentive" (HI/PRI) countermeasure was developed in different versions for two distinct populations of drivers: the Speed HI/PRI was designed for multiple violators of the 55 Maximum Speed Law (MSL), while the Negligent Operator (Neg-Op) HI/PRI was designed for drivers classified as negligent operators (based on their traffic conviction records). Both HI/PRI countermeasures covered the safety and energy-saving advantages of 55 MSL compliance; the Neg-Op HI/PRI included general traffic safety material as well.

The multiple 55 MSL violators were assigned at random to either the Speed HI/PRI or a no-contact comparison group. The negligent operators were assigned at random to one of four conditions: the Neg-Op HI/PRI, the then-existing group educational meeting conducted at DMV field offices, a modified group meeting incorporating coverage of 55 MSL issues, or a no-contact comparison group.

The Speed HI/PRI and Neg-Op HI/PRI were each estimated to be cost-beneficial on the basis of accidents prevented, the latter definitively so. In addition, the Neg-Op HI/PRI had a larger estimated effect on accidents and lower cost than the group meeting countermeasures, which in themselves were also cost-beneficial. The coverage of 55 MSL issues in the group meeting did not appear to influence its effect at reducing either accidents or convictions. All of the countermeasures appeared to reduce subsequent convictions.

The findings would ordinarily have been regarded as sufficiently positive to recommend implementation of the HI/PRI treatments. However, during the course of the study, the

DMV's negligent-operator program was replaced with a new series of countermeasures known as the Negligent Operator Treatment System (NOTS). The new system included expanded entry criteria, such that both the Neg-Op HI/PRI and the Speed HI/PRI populations were encompassed by the NOTS. The DMV evaluates, on an ongoing basis, the effectiveness of the NOTS system in the Negligent Operator Treatment Evaluation System (NOTES). It was considered necessary to await the findings from NOTES before considering implementation of the HI/PRI alternative.

In order to allow for future conviction masking should the HI/PRI prove superior to the NOTS treatments, it was recommended that AB 2505 be extended in modified form to allow such future conviction masking at the discretion of the Director of the Department of Motor Vehicles, with a termination date of December 1989. If, at that time, the HI/PRI remained the superior countermeasure, it was recommended that the Department should seek legislation authorizing DMV to make the program permanent.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The Department initiated legislation to implement the above recommendation, which was subsequently enacted into law. The law sunsetted without the program having been implemented.

SUPPLEMENTARY INFORMATION:

An abbreviated version of this study was published in 1984 by Kadell under the title "The Traffic Safety Impact of Withholding from Public Inspection One Conviction on the Driving Record of Qualifying Drivers (In Accord with Chapter 544, 1980 Regular Legislative Session [Assembly Bill 2505 Calvo])." Two other versions of this study are:

"Traffic Safety Impacts of the Home Instruction/Point Reduction Incentive (HI/PRI) Program," *Journal of Safety Research*, 18(4), 149-178 (Kadell, 1987) and

"Traffic Safety Impact of Driver Improvement Countermeasure Targeting 55 MPH Speed Limit Compliance," *Proceedings of the Second Symposium on Traffic Safety Effectiveness (Impact) Evaluation Projects*, Chicago Illinois, (Kadell, June 1985).

TITLE: The Long-Term Traffic Safety Impact of Pilot Alcohol Abuse Treatment as an Alternative to License Suspensions (Volume 2 of "An Evaluation of the California Drunk Driving Countermeasure System")

AUTHOR(S): Daniel D. Sadler &
M. W. Perrine

DATE: April 1984

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 90

NTIS NUMBER: PB84-216225

PROJECT OBJECTIVE:

To evaluate the long-term traffic safety effects of participating in a Senate Bill (SB) 330 drunk driver program in lieu of receiving a mandatory license suspension or revocation.

SUMMARY:

In 1975, new legislation (SB 330, Gregorio) permitted motorists arrested for a repeat driving-under-the-influence (DUI) offense to participate in a 12-month pilot treatment program in lieu of the usual license action (12-month suspension or 3-year revocation). In an earlier study, the first-year effectiveness of the pilot SB 330 programs versus license actions was assessed (Hagen, Williams, McConnell, & Fleming, 1978). This study was a replication, using the same subjects and a longer (four years) follow-up period.

The evaluation design involved four demonstration counties and four comparison counties. In the demonstration counties, 2,534 repeat DUI offenders entered SB 330 programs, and thus avoided mandatory license actions. The remaining 2,420 offenders in the demonstration counties received license actions. In the comparison counties, 2,866 repeat DUI offenders all received license actions.

Among the license-action recipients, those who received 3-year revocations had fewer subsequent nonalcohol-involved accidents and convictions than did those who received 12-month suspensions. This was especially true among subjects under 36 years old. The lower rates for the revoked drivers were expected since the non-recidivating subjects who had received suspensions were eligible for license reinstatement 12 months after their DUI conviction. However, although their rates showed some elevation, the recipients of 12-month suspensions continued to have fewer nonalcohol-involved accidents and convictions than the SB 330 participants beyond the period of suspension. This result appeared to be attributable to a low rate of license reinstatement (50%) among the eligible subjects with 12-month suspensions. About four out of five eligible subjects who were not reinstated did not execute the proof of insurance requirement for license reinstatement at any time during the three years following the termination of their suspension.

A different pattern of results was obtained for alcohol-involved accidents and convictions. The SB 330 participants were found to have 9% fewer alcohol-related convictions than the license-action recipients.

No significant differences were found between SB 330 participants and license-action recipients on alcohol-involved accidents. Thus, the results of the analyses of alcohol-related accidents and convictions, as a whole, suggested that alcohol rehabilitation and license action had essentially the same impact on these traffic safety measures.

The findings of this study suggested that the original SB 330 sentencing strategy sacrificed traffic safety when license actions were waived as an incentive to participation in an alcohol rehabilitation program. The hoped-for reductions in alcohol-related accidents and convictions among SB 330 program participants did not occur. The report notes that these findings indicate that some other alternative besides license-action waivers should be used as an inducement for repeat DUI offenders to participate in treatment.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Although the SB 330 concept was implemented statewide through SB 38 (Gregorio, 1977), some of its weaknesses were corrected through subsequent legislation (SB 1458, Gregorio, 1978) which limited participation in lieu of license action to second offenders only. Legislation (AB 541, Moorhead, 1981) also required that SB 38 participants have their driving privilege restricted. This license-restriction approach was evaluated by the DMV, and findings will be presented in Tashima and Peck, Report #95. Finally, legislation enacted in 1982 (SB 1601, Sieroty) required that SB 38 participants conform to the state's proof-of-insurance requirement in order to avoid continuance of the license restriction.

SUPPLEMENTARY INFORMATION:

See Tashima and Peck, Report #95, and Peck, Report #112.

A summary version of this report, entitled the long-term safety impact of a pilot alcohol abuse treatment as an alternative to license suspension was published in *Accident Analysis and Prevention*, 23(4), 203-224, 1991.

Some of the data also appear in a related paper by Peck, R. C., Sadler, D. D. & Perrine M. W. (1985), The comparative effectiveness of alcohol rehabilitation and licensing control actions for drunk driving offenders: A review of the literature. *Alcohol, Drugs and Driving*, 1(4), 15-39.

TITLE: An Evaluation of the Process Efficiency and Traffic Safety Impact of the California Implied Consent Program (Volume 4 of "An Evaluation of the California Drunk Driving Countermeasure System")

AUTHOR(S): Daniel D. Sadler

DATE: January 1986

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 96

NTIS NUMBER: PB86-195633

PROJECT OBJECTIVE:

To identify problems in the implied consent (IC) system and to evaluate its impact on traffic safety.

SUMMARY:

This study was designed to describe the California IC system and to answer a number of questions related to the program's operational efficiency and effectiveness, the characteristics of its target population, and its impact on traffic safety. In 1982, the DMV received 31,978 chemical test refusal reports from law enforcement agencies. Ninety-eight percent (31,285) of these reports resulted in license suspensions, and 31% (9,672) of those suspended requested hearings. On the average, one out of every two hearings was rescheduled. Twenty-seven percent of those who requested hearings either failed to appear at or canceled their hearings. About 92% of all hearings resulted in suspensions being upheld.

In 1982, 61% of refusers were convicted of the related DUI charge, compared to a 66% conviction rate for all DUI arrestees. Although refusers were found to consist of 55% more repeat offenders than nonrefusing DUI offenders, the net total accident risk over a 30-month period (combining the 18 months prior, and the 12 months subsequent, to the beginning of their sanctions) differed by less than 1%. In the subsequent 12 months, both refusers and nonrefusers were found to have higher risks of accident involvement than the general driving population.

The results from an analysis of the traffic safety impact of the IC suspension demonstrated that suspending refusers is an effective countermeasure for this subgroup of the DUI population. During the 6-month suspension period, refusers whose suspensions were reinstated after an administrative hearing had significantly fewer alcohol-related accidents (63.7%), nonalcohol-related accidents (76.5%), and total accidents (72.2%) than did refusers whose suspensions were set aside.

It was recommended that, given the high costs and lengthy time lag associated with the IC hearing process, the Department should explore alternatives to lower costs and shorten time lags without sacrificing the traffic safety benefits already achieved by the current system. It was suggested that one way to reduce the costs of the IC program would be to discourage hearing requests from those who were likely to cancel or fail to appear, perhaps by means of a filing fee.

The report notes that one promising approach for reducing both time lags and costs is early suspension accompanied by postsuspension administrative reviews. Law enforcement officers could seize the drivers license of a refuser and issue a form serving both as temporary license (good for, say, 7 days) and a suspension notice. Refusers would be suspended earlier, and there would be fewer hearing requests because the suspension would remain in effect pending the outcome of the hearing, which would discourage dilatory hearing requests. This approach had been successfully used in Minnesota for several years for both those who refused tests and those who failed them (by having blood alcohol concentrations of .10 or higher). Motivated to a large extent by the early suspension criterion for qualifying for the Federal Alcohol Incentive Grant Program, many states had adopted laws similar to Minnesota's.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The administrative per se statute, enacted 7/1/90 (SB 23 Lockyer), contained some of the recommendations of this report. Legislation eliminating the distinction between informal and formal hearings was introduced in the 1990 legislative session (AB 3311, Woodruff) and was enacted into law. The recommendation that the DMV not routinely subpoena officers for IC hearings was implemented in March, 1990. Early results indicated that the set-aside rate had not increased as a result of this change, and that substantial cost savings to the DMV and law enforcement agencies should result.

SUPPLEMENTARY INFORMATION:

See Peck, Report #112.

TITLE: The California DUI Countermeasure System: An Evaluation of System Processing and Deficiencies. (Volume 5 of "An Evaluation of the California Drunk Driving Countermeasure System")

AUTHOR(S): Clifford J. Helander

DATE: January 1986

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 97

NTIS NUMBER: PB86-184025

PROJECT OBJECTIVE:

Specific objectives of this study were: (1) identification of deficiencies in the California DUI countermeasure system, and (2) evaluation of the frequency with which DUI offenders avoid timely processing or circumvent system countermeasures due to these deficiencies. The general objective of the study was to empirically describe and analyze the flow of DUI offenders through the DUI countermeasure system.

SUMMARY:

A total of 3,959 DUI offenders arrested by 44 law enforcement agencies in 7 sample counties were tracked through the DUI system from the point of arrest through postconviction countermeasures. A separate sample of 701 convicted DUI offenders referred to alcohol education/treatment programs in the 7 sample counties was identified from program provider records and tracked through Department of Motor Vehicles (DMV), court, and program records. Among the results of the empirical analysis of DUI offender flow through the DUI countermeasure system were the following:

- There was wide variation in the probability of conviction for a DUI offender depending upon the county and court in which the offense was adjudicated; the use of sanctions also varied widely by county and court.
- The majority of alcohol education and treatment program dropouts were not reported to the DMV by the courts, and a substantial proportion of DUI offenders avoided license suspension as a result.
- 9% of drivers arrested for DUI were under license suspension or revocation at the time of arrest; only 20% of these drivers were convicted of the offense of driving while suspended or revoked.
- A surprisingly large proportion of DUI offenders were unlicensed or had multiple driver records.

Based on study findings it was concluded that: (1) the probability of punishment for DUI offenses must be increased in order to produce any large-scale impact on the problem of drinking and driving, (2) the citation and conviction rates of those who drive while suspended or revoked must be improved in order for license suspension to remain an effective and credible traffic safety countermeasure, (3) in order for the DUI countermeasure system to

function as a true system, goals and objectives must be developed along with a management information system to assess the achievement of those goals and objectives, and (4) improvement is needed in the accuracy of records in the DUI countermeasure system. Accordingly, the following recommendations for system improvements were offered: (1) legislation should be enacted to require administrative per se license suspension upon arrest for DUI and for any conviction of DUI, (2) efforts should be undertaken to improve the prosecution and conviction of drivers known to violate the suspension/revocation order, (3) a coordinating committee or centralized agency should be established to set the goals and objectives of the DUI countermeasure system, and a management information system developed to continuously assess the achievement of those goals and objectives, and (4) the DMV should establish criteria for matching accident reports and court abstracts to driver records which maximize the probability of matching entries to existing driver records without significantly increasing the number of incorrect matches.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

See Peck, Report #112. The Department made some alterations in its file-matching procedures and additional modifications are in progress at the time of writing. The Department also obtained an OTS grant entitled "Development of an Improved Management Control System for DUI Drivers." This grant resulted in a conceptual design for a DUI MIS system (see Helander, Report 121). Another OTS Grant, "Post-Disqualification Control of DUI Offenders," established a pilot demonstration project to improve the detection, apprehension, prosecution and conviction of suspension/revocation violators; see DeYoung, Report #129. Legislation, (AB 757 Friedman) was enacted which mandated the establishment of an ongoing DUI data monitoring system to provide annual "State of the System" reports to the legislature beginning 1/1/92, and administrative per se license suspension was enacted into law effective 7/1/90 (SB 1623 Lockyer).

SUPPLEMENTARY INFORMATION:

A summary of this paper was presented at the 1988 *Conference on the Control and Management of High-Risk Drivers*, Sacramento, CA, June 16-17, 1988.

TITLE: An Evaluation of the Impact of a Warning Letter for First-Time DUI Offenders
(Volume 6 of "An Evaluation of the California Drunk Driving Countermeasure System")

AUTHOR(S): Gary Arstein-Kerslake

DATE: January 1986

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 104

NTIS NUMBER: PB86-202603

PROJECT OBJECTIVE:

To develop, implement, and evaluate a package consisting of a warning letter and pamphlet suitable for the first-DUI offender.

SUMMARY:

In conducting this analysis, the California Department of Motor Vehicles (DMV) sought to determine whether warning letters and informational materials could successfully augment other DUI countermeasure efforts, resulting in reductions in subsequent accident and DUI recidivism rates. In general, studies had indicated that warning letters do provide some reduction in accidents and convictions. Given their low cost and unobtrusiveness, it was hoped that these effects could be extended to DUI offenders, though it was acknowledged that such warning letters would constitute only a very small part of the countermeasure regimen for first DUI offenders.

Two issues were addressed in this analysis: 1) Frequency of mailing - is there a benefit to sending a second warning letter to reinforce the principles outlined in the first letter? 2) Type of warning letter - is there a benefit to "personalized" warning letters, as suggested by prior research?

Briefly, warning letters were found to provide no significant reduction in accidents or convictions for DUI offenders. Neither the frequency of mailing nor the type of warning letter appeared to make any difference. It was therefore recommended that none of the letters studied be implemented.

The report notes that the Department already used a DUI warning letter for certain drivers as part of its Negligent Operator Treatment System (NOTS). Since evaluation of the NOTS program is ongoing, it was recommended that the alcohol warning-letter portion of the program be discontinued, given that the NOTS evaluation system (NOTES) supported study findings.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The Department did not adopt any of the letters evaluated in this study. On the other hand, evidence from NOTES Report #5 (Marsh) suggesting that alcohol warning letters were more effective than standard warning letters in reducing injury accidents. Subsequent NOTES reports did not consistently replicate this finding but the DUI letters were retained.

SUPPLEMENTARY INFORMATION:

See McBride and Peck, Report #30, Epperson and Harano, Report #45, and the series of NOTES reports for further information on DUI warning letters.

TITLE: An Evaluation of the California Habitual Traffic Offender Law

AUTHOR(S): Clifford J. Helander

DATE: May 1986

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: 107

NTIS NUMBER: PB87-151056

PROJECT OBJECTIVE:

To evaluate the California habitual traffic offender law (AB 3529 - Mountjoy) in terms of: (1) the number of habitual traffic offenders (HTO) identified, (2) their prosecution and conviction rates, and (3) the degree of traffic safety risk posed by HTOs.

SUMMARY:

The California habitual traffic offender (HTO) law was enacted in 1982 in an effort to improve the post-disqualification control of suspended/revoked drivers who continue to drive. Under this law, all suspended/revoked drivers who accumulated a driving history meeting specified criteria were identified as HTOs and reported to district attorneys of jurisdiction for prosecution. Conviction as an HTO carries a heavy fine and mandatory jail sentence. The identification and reporting of HTOs, mandatory under the original 1982 law, was made permissive under remedial legislation enacted in 1984.

Based on the results of this evaluation, the original HTO law was not a successful countermeasure. In only 4% of 13,725 cases did district attorneys indicate a willingness to prosecute identified HTOs, and the overall conviction rate was less than 1%. It is clear from sample driver record data, however, that HTOs represent an extremely high risk group of drivers, with a prior accident rate 5 times, and a fatal/injury accident rate 10 times, that of the general driving population. Based on study results, it was recommended that the Department of Motor Vehicles not implement immediately the new permissive HTO reporting program, but that further program and/or legislative remedies be developed based on the recommendations of a task force formed to address the HTO problem and in accordance with the results of a then-current OTS-funded study entitled, "Post-Disqualification Control of DUI Offenders" (study published as DeYoung, Report #129).

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The recommendation not to initiate discretionary HTO sanctions was accepted.

SUPPLEMENTARY INFORMATION:

Although the discretionary HTO law remains on the books (CVC §14601.3), no California county is currently prosecuting or requesting identification of HTOs.

Recommendations from report 129 were incorporated into major 1994 legislation (AB 3148 - Katz, and SB 1758 - Kopp) addressing suspended/revoked drivers who continue to drive.

TITLE: Accident Rates, Financial Responsibility, and Restriction Compliance of SB-38 Participants

AUTHOR(S): Clifford J. Helander

DATE: June 1986

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: Unnumbered

NTIS NUMBER: None

PROJECT OBJECTIVE:

To collect data regarding the accident rates, financial responsibility, and restriction compliance of SB-38 alcohol treatment program participants, in response to a legislative proposal requiring proof of financial responsibility for SB-38 program participants.

SUMMARY:

In order to address questions raised by a legislative proposal requiring proof of financial responsibility for SB-38 alcohol treatment program participants, samples of SB-38 participants were identified and selected from departmental data sources (BAC and S&R action tapes for August 1984). Data analysis revealed that SB-38 participants: (1) had a significantly higher accident rate than either suspended second-DUI offenders or the driving population as a whole, (2) were at least twice as likely as the general driving population to not have insurance at the time of an accident, and (3) filed mandatory insurance proof to remove license restrictions only a third of the time. Based on these results, it was strongly recommended that the department support the legislative proposal requiring mandatory proof for SB-38 participants.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Data from this study were instrumental in the passage of legislation requiring mandatory proof of financial responsibility for SB-38 program participants.

SUPPLEMENTARY INFORMATION:

None.

TITLE: Final Report to the Legislature of the State of California. The Relationship Between Blood Alcohol Concentration Level and Court Sanction Severity in Drunk Driving Cases

AUTHOR(S): Helen N. Tashima

DATE: September 1986

FUNDING SOURCE: State Legislative
Appropriations

REPORT NUMBER: 109

NTIS NUMBER: PB87-123618

PROJECT OBJECTIVE:

To provide the legislature with tabulations of sanction severity by blood alcohol concentration (BAC) level and license status for first and second DUI offenders, prior and subsequent to the enactment of Assembly Bill (AB) 144 (Naylor, 1985).

SUMMARY:

AB 144 (Naylor, 1985) required that the court regard a BAC of .20% or more as a special factor to consider in enhancing penalties when sentencing drunk drivers. This final report summarizes the tabulations of sanction severity by BAC level for first and second DUI offenders, both prior and subsequent to the enactment of AB 144, and by the offender's license status at the time of the DUI arrest (valid vs. suspended license).

Only DUI offenders with reported BAC levels were selected for analysis. (Because of court omissions and/or unavailability of BAC information, only 43% of all DUI convictions contained the offender's BAC.) The results indicated that first offenders with high BAC levels received the jail sanction more frequently than did those with low BAC levels, while the low-BAC drivers more likely received the license restriction sanction than did high-BAC offenders. Most of the invalidly licensed first offenders received the jail/program sanction. The 6-month license suspension sanction was not often used by courts for first offenders (2-3% and 15-18% for validly and invalidly licensed offenders, respectively). An evaluation of the largest counties showed wide variation in the use of these sanctions regardless of BAC level and time period (pre/post AB 144).

Sanctions given to most second offenders did not vary with BAC level or time period. However, already-suspended second offenders with high BAC levels were much more likely to receive the stringent sanction of license suspension than were low-BAC offenders.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The Department supported the passage of AB 3681 (Frazee), effective 1/1/89, which required courts to provide DMV with the results of available chemical tests of BAC levels.

SUPPLEMENTARY INFORMATION:

An interim report (#105, Tashima) was transmitted to the legislature in March 1986.

TITLE: An Evaluation of the Specific Deterrent Effects of Alternative Sanctions for First and Repeat DUI Offenders (Volume 3 of "An Evaluation of the California Drunk Driving Countermeasure System")

AUTHOR(S): Helen Tashima &
Raymond C. Peck

DATE: December 1986

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 95

NTIS NUMBER: PB87-194676

PROJECT OBJECTIVE:

To evaluate the relative effectiveness of the licensing actions and sanctions established by Assembly Bill (AB) 541 on January 1, 1982 for first and repeat DUI offenders.

SUMMARY:

This quasi-experimental study evaluated the effectiveness of the new 1982 California DUI sanctions (AB 541) upon the subsequent driving records of statewide samples of first and second DUI offenders, convicted in October-December 1982, and assessed the overall impact of AB 541 by comparing DUI drivers convicted before and after AB 541 implementation. Six-month and 1-year posttreatment driving records were compared among second offenders who received either (1) license suspension or (2) license restriction plus an alcohol rehabilitation (SB 38) program. Similar driving records were compared for first offenders who received (1) license suspension, (2) jail and fine only, (3) program and jail, (4) license restriction only, and (5) license restriction plus program.

Among second offenders, the suspended group ($N = 7,797$) had rates significantly lower than those of the restricted SB 38 group on the 1-year posttreatment nonalcohol, fatal/injury, and total accident measures. On alcohol accidents, the rates for the two groups did not differ significantly. On subsequent major convictions (including DUI), the restricted SB 38 group's rate was significantly lower than that of the suspended group. In the first offender analyses ($N = 29,097$) there was a significant overall difference among the groups, with the following pattern of results. First offenders who were given stronger license control sanctions incurred accident and conviction rates that were lower than those of offenders given lesser penalties. The suspended group had the lowest total and nonalcohol (1-year) accident rate, while the restricted program group had the lowest 6-month alcohol-related accident rate. The restricted program and restricted-only groups had the lowest rates of 1-year major convictions.

Findings from the pre-post AB 541 analyses indicated that AB 541 had an impact in lowering alcohol accident, total accident and major conviction rates among DUI drivers.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Senate Bill 1623 (Lockyer), effective 7/1/90, implemented "administrative per se" suspension of the driver's license for 0.10% BAC level on a DUI arrest or refusal to take the BAC test.

SUPPLEMENTARY INFORMATION:

See Peck, Report #112.

TITLE: Pilot Test of Four Written Driver License Knowledge Tests

AUTHOR(S): Michael A. Gebers

DATE: December 1986

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic Safety Administration

REPORT NUMBER: Unnumbered

NTIS NUMBER: None

PROJECT OBJECTIVE:

To provide technical assistance to the Division of Headquarters Operations in pilot testing four of the Department's written driver license examinations and to provide test and item statistics.

SUMMARY:

A pilot test of the English versions of (1) the 46-item test for original applicants 18 years or older (DL-5, Rev. 12/84), (2) the 18-item test for renewals (DL-4, Rev. 7/86), (3) the 46-item test for 15-17 year olds (DL-5T, Rev 8/85), and (4) the 25-item motorcycle test (DL-5K, Rev. 1/86) was conducted from September 25 through September 26, 1986. Field Offices administered and sent to Headquarters tests from first attempt applicants only.

The following data were obtained:

1. Percent of responses on each item alternative and item - whole correlations for each test form.
2. Cumulative percent of total applicants by number of items missed for each test form.
3. Fail rate, mean items missed, and test reliability for each test form.

Results of the pilot indicated that a number of test forms and items needed revision in order to achieve acceptable fail rate and reliability standards. It was also recommended that since the Hispanic and Asian populations are continuing to grow in California, and in fairness to applicants tested in a language other than English, a follow-up pilot of the non-English written tests should be conducted.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Recommendation to review certain test item and forms for improving reliability and fail rates were implemented as part of the ongoing test revision/printing project.

SUPPLEMENTARY INFORMATION:

None available.

TITLE: Use of Proxy Measures in Evaluating Post licensing Control Treatments

AUTHOR(S): Mary K. Janke &
Raymond C. Peck

DATE: August 1987

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: Unpublished
(internal) report

NTIS NUMBER: None

PROJECT OBJECTIVE:

To describe and evaluate the usefulness of alternative (accident proxy) measures in traffic safety studies.

SUMMARY:

Because accidents are rare events greatly influenced by chance factors, the use of possible proxy measures as criterion measures in traffic safety studies was evaluated. Such measures as performance on written or drive tests, psychomotor test scores, and program assessments provided by affected target group members were discussed. It was concluded that none of these remotely approach the validity of driver record variables as program effectiveness measures. Of programs dealing with negligent drivers, the 3-accident reexamination program was noted as having the best potential for proxy evaluation in the form of pretests and posttests of defensive-driving knowledge and perceptual skills.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Not applicable.

SUPPLEMENTARY INFORMATION:

None.

TITLE: Traffic Violator School Dismissals: The Effects of Citation Masking on Accident-Risk Assessment and on the Volume of Department of Motor Vehicles' License Control Actions

AUTHOR(S): Michael A. Gebers,
Helen N. Tashima &
William C. Marsh

DATE: September 1987

REPORT NUMBER: 113

FUNDING SOURCE: Departmental Budget

NTIS NUMBER: PB88-128822

PROJECT OBJECTIVE:

To evaluate the effects of citation masking on accident-risk assessment and on the volume of Department of Motor Vehicles' license control actions.

SUMMARY:

SB 1455, enacted on January 1, 1983, required that California courts report traffic violator school (TVS) dismissals to the Department of Motor Vehicles (DMV) for research purposes only. Dismissals were not to be reported to any persons or agencies other than the courts. This report was the product of an investigation into the effects of TVS citation masking on accident-risk assessment and on DMV license control actions.

A total sample of 158,780 subjects was randomly selected from three sources: (1) drivers assigned to TVS, (2) drivers who received DMV negligent-operator (neg-op) treatments, and (3) drivers representative of the California driving population. Demographic and driver record data are presented for each group.

The analyses indicated that the loss in prior driver record data when TVS citations are dismissed and masked resulted in a substantial underestimate of the accident rate of TVS subjects. The enhancement in the actuarial utility of DMV records resulting from a January 1, 1986 law change, allowing the public disclosure of TVSs following the first within any 12-month period, was very slight. The results also indicated that: (1) a TVS dismissal was significantly more predictive of future accidents than was an additional conviction, and (2) approximately 24,000 Level 3 and 10,000 Level 4 DMV negligent-operator interventions (normally probations and suspensions, respectively) were circumvented over a 3-year period because of TVS dismissals.

It was recommended that legislation be enacted to abolish or greatly restrict the use of TVS citation dismissals.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

As of 1992, 25 courts had discontinued the practice of dismissing citations of drivers attending TVS.

SUPPLEMENTARY INFORMATION:

See Peck, Kelsey, Ratz, and Sherman, Report #71; Peck & Gebers, Report #133; Gebers, Report # 147; and Gebers, Peck, Janke, and Hagge (1993), R&D monograph.

TITLE: An Evaluation of the California Drunk Driving Countermeasure System: An Overview of Study Findings and Policy Implications

AUTHOR(S): Raymond C. Peck

DATE: December 1987

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 112

NTIS NUMBER: PB88-186051

PROJECT OBJECTIVE:

To summarize the results and policy implications of a major federally funded seven-part study entitled An Evaluation of the California Drunk Driving Countermeasure System.

SUMMARY:

This report summarizes, and provides an overview of, a seven-part DUI study which pinpointed numerous deficiencies in California's DUI control system and concluded that license suspension is generally more effective than alcohol rehabilitation programs in reducing the accident risk of DUI offenders. The results suggest that using both sanctions simultaneously would be superior to either alone. An evaluation of pre- and post-1982 rates indicated that the tougher sanctions and illegal per se BAC statutes (0.10%) enacted in 1982 reduced the incidence of alcohol-related accidents and DUI recidivism. Key recommendations include enactment of an administrative per se suspension statute and mandatory suspension of both first and repeat offenders, and police authority to utilize pre-arrest breath screening instruments. A detailed description of the elements of a proposed improved DUI control system is also included in the report.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The recommendation to develop a DUI management information system was pursued through a federally-funded grant project, and the establishment of such a system was legislatively mandated by AB 757 (Friedman), effective 1/1/90. Administrative per se license suspension was enacted by SB 1623 (Lockyer), effective 7/1/90. California traffic police are currently using pre-arrest alcohol screening (PAS) devices.

SUPPLEMENTARY INFORMATION:

See Perrine, Report #89; Sadler and Perrine, Report #90; Tashima and Peck, Report #95; Sadler, Report #96; Helander, Report #97; and Arstein-Kerslake, Report #104.

TITLE: Proof-of-Service Rates for Suspended or Revoked Drivers as a Function of Mailing Contact Strategy

AUTHOR(S): Michael A. Gebers &
Marvin Hanely

DATE: July 1989

REPORT NUMBER: 120

FUNDING SOURCE: Office of Traffic Safety

NTIS NUMBER: None

PROJECT OBJECTIVE:

In an attempt to increase proof rates, this study developed and evaluated a number of mailing strategies for various categories of suspension or revocation reason.

SUMMARY:

Among the mailing factors evaluated were (1) use of certified mail, (2) use of a follow-up contact, (3) use of a postage-paid return envelope, and (4) masking the DMV return address of the certified-mail action notice. The results indicated that there were significant differences between the types of mail contact employed, as well as between the different categories of suspension or revocation reason. The most effective strategies (using certified mail, return receipt requested) resulted in proof rates of approximately 60% to 70% compared to approximately 25% for the current first-class mailing procedure. Recommendations were made for increasing proof of service through use of certified mail.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Consideration of the recommendation to use certified mail was deferred until completion of Report #129 (DeYoung).

SUPPLEMENTARY INFORMATION:

Reports #129 (DeYoung) provided further support for use of certified mail. Legislation is being sought to implement the recommendation of both reports. The information contained in this report and report 129 were condensed into a single journal paper by Gebers, M. A., DeYoung, D. A., and Peck, R. C. (1997), The Impact of Delivery Service Strategy on the Effectiveness of Driver License Withdrawal--an Experimental Evaluation, *Accident Analysis and Prevention*, 29(1), 65-79.

TITLE: A Comparison of the Relative Effectiveness of Alternative Sanctions for DUI Offenders (Volume 1 of "Development of a DUI Accident and Recidivism Tracking System")

AUTHOR(S): Helen N. Tashima &
William D. Marelich

DATE: December 1989

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 122

NTIS NUMBER: PB90-226390

PROJECT OBJECTIVE:

To develop a DUI data base for tracking accident and recidivism rates of first, second and third-or-more DUI drivers; to identify programs and sanctions associated with reduced accident and conviction rates, and to develop a system for detecting variation among counties in DUI sanctioning policy.

SUMMARY:

Quasi-experimental analyses were conducted evaluating the association between various DUI sanctions and the posttreatment driving records of a 1984 statewide sample of 96,711 first, second and third-or-more (third+) DUI offenders. Six-month (first offenders only) and 1- and 2-year subsequent accidents and convictions were compared for various sanctions within each of the three offender groups. Analyses were also conducted, within each offender group, evaluating the relationship between subsequent driving record and county average fine, number of jail days prescribed (or jail vs. no jail for first offenders) and, for a subsample, blood alcohol concentration level (BAC). Aggregated county DUI recidivism and accident data were evaluated in relation to the proportions of various sanctions given by each county, the average county fine, and a sanction stringency score derived from several variables included in a DUI court survey.

First-offender groups receiving some form of driving curtailment (license restriction or suspension), either alone or in conjunction with an SB 38 or first-offender alcohol program, had significantly fewer posttreatment accidents than did groups receiving no license control. Groups without license control actions had the highest subsequent accident and conviction rates. License suspension among second offenders was significantly associated with reduced subsequent total accidents, while SB 38 program plus license restriction was significantly associated with reduced subsequent alcohol-related accidents and major convictions. Although significant sanction differences on several outcome measures were present for third+ offenders, the uncertainty of prior treatment effects within both groups raised questions about the validity of these findings. Longer jail terms for repeat offenders were associated with fewer subsequent alcohol-related accidents, total accidents and major convictions. High BAC levels were associated with more subsequent alcohol-related accidents and major convictions for both first and second offenders, but not for third+ offenders. There was evidence that counties imposing higher fines for repeat offenders experienced fewer subsequent total accidents than would be predicted on the basis of driver and area characteristics alone.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

A DUI management information system was developed and implemented pursuant to AB 757 (Friedman), effective 1/1/90. As of this writing, 6 annual "state of the state" DUI-MIS legislative reports had been produced.

SUPPLEMENTARY INFORMATION:

See Helander (1989), Report #121 for the conceptual design of a DUI management information system. Also see Rogers & Schoenig (1989), Report #123 for volume II of this study.

TITLE: A Time Series Evaluation of the General Deterrent Effects of California's 1982 DUI Legislative Reforms (Volume 2 of "Development of a DUI Recidivism Tracking System")

AUTHOR(S): Patrice N. Rogers &
Steve E. Schoenig

DATE: December 1989

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 123

NTIS NUMBER: PB90-226408

PROJECT OBJECTIVE:

To evaluate the effect of a series of 1982 DUI legislative reforms in deterring drunk driving, as measured by the impact on alcohol-related fatal or injury accident rates.

SUMMARY:

This project evaluated the effects of legislative reforms to California's DUI countermeasure system, which in part introduced the illegal per se standard, enhanced penalties, and mandated greater uniformity with regard to sentencing than had previously been applied. Intervention time series analysis was used to evaluate the deterrent effects of these laws on the general population of DUI offenders, as measured by effects in alcohol-related traffic accident rates, both statewide and in counties sharing similar demographic and enforcement patterns. A second group of analyses were performed to assess the significance of the formation of the emerging anti-drunk-driving sentiment largely popularized by the formation of Mothers Against Drunk Driving (MADD).

Both implementation of the DUI statutes, and the publicity and societal dynamics surrounding the creation of MADD, were found to be associated with reductions in subsequent alcohol-related fatal and injury accident rates, with evidence of more pronounced effects among injury accidents. Significant intervention effects were found in each regional grouping with little variation between groups, indicating that, as grouped, differences in demographics and county enforcement policies did not mediate the significant general deterrent impact of the DUI legislative intervention.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

In 1990, California reduced the per se BAC threshold to .08 and enacted a preconviction administrative license suspension law.

SUPPLEMENTARY INFORMATION:

This study was Published in *Accident Analysis and Prevention*, 26(1), 63-78 1994. For related California DMV studies, see Rogers, *The General Deterrent Impact of California's 0.08% Blood Alcohol Concentration Limit and Administrative Per Se License Suspension Laws*, Report #158, and *The Specific Deterrent Impact of California's 0.08% Blood Alcohol Concentration Limit and Administrative Per Se License Suspension Laws*, Report #167. Recommendations for enactment of a 0.10% illegal per se BAC threshold were made in a 1975 legislative report pursuant to Senate Concurrent Resolution 44-Harmer (Epperson, Harano & Peck, 1975).

TITLE: The Identification of High-Risk Drivers through Age-Mediated Point Systems

AUTHOR(S): Michael A. Gebers &
Raymond C. Peck

DATE: October 1990

REPORT NUMBER: Unnumbered

FUNDING SOURCE: Departmental Budget

NTIS NUMBER: None

PROJECT OBJECTIVE:

To determine if there is quantitative justification for applying age-mediated intervention programs to older drivers.

SUMMARY:

Studies have consistently shown that while young drivers pose the greatest accident risk, there is evidence of an increase in the accident rate among older drivers at about 70 years of age. Evidence suggests that the increase in the accident rate among older drivers is attributable to age-related deterioration in driver competency. Following the teen years, California's license control programs identify high-risk drivers based on points only and therefore may not be sensitive to age-related changes in driver performance among older persons.

Analyses were conducted on the possible interactive relationship between age and driving record. Results from both descriptive and inferential analyses indicated that older drivers exhibit a steeper increase in future accident risk at successive incident levels, relative to drivers in general. For example, within the group of drivers who have 5 convictions in 3 years, a rate of 361 accidents per 1000 drivers was predicted in the next 3 years among the general population, 395 accidents among drivers 60-69, and 431 accidents among drivers 70 and above. The difference between 431 and 361 represents an increased accident expectancy of 19%.

Although it was stated that a number of interpretations might be advanced to explain the direction of the results, the most intuitively plausible is that unlawful driving may interact with changes due to aging to produce an accentuated level of risk. Another possibility offered is an age-exposure interaction in which the elevation is mediated by increased mileage expected of drivers with elevated traffic citation and accident frequencies. It was concluded that, statistically, older drivers tend to represent a higher relative accident risk at elevated point counts. However, the issue as to whether the results warrant implementation of a modified point system as a device for selecting out accident-labile older drivers could not be answered unequivocally from the analyses presented. The report advises that such a decision should be based, in part, on further investigation of the mechanisms underlying the age interaction and on the nature and effectiveness of the interventions.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

At the time of this writing, the department is developing procedures to initiate non-obtrusive driver improvement and education interventions for drivers aged 70 and above at a lower point count level.

SUPPLEMENTARY INFORMATION:

Paper presented at the *Conference on Driver Competency Assessment*, San Diego, California, October 24-26, 1990. Also published in *Journal of Safety Research*, 23(2), 81-93, 1992

TITLE: Development, Implementation and Evaluation of a Pilot Project to Better Control Disqualified Drivers

AUTHOR(S): David J. DeYoung

DATE: December 1990

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 129

NTIS NUMBER: PB92-101609

PROJECT OBJECTIVE:

To develop and evaluate better measures for controlling suspended or revoked drivers who continue to drive while disqualified. Project tasks included: 1) examining the suspended/revoked driver population and analyzing deficiencies in the license suspension enforcement system that allow disqualified drivers to escape detection, prosecution and conviction of driving while disqualified, 2) developing a pilot program consisting of measures to better control disqualified drivers (implemented in Ventura County, California for a period of 6 months), and 3) analyzing data on system processing of disqualified drivers, and on subsequent accidents and traffic convictions for this group, to provide a measure of the success of the pilot program.

SUMMARY:

Descriptive statistics were calculated for a sample of 5,842 suspended/revoked drivers. These statistics showed that suspended/revoked drivers average 8.16 years younger than California drivers overall, and 75% male versus 54% in the general driving population. The three-year prior driving record of subjects in the suspended/revoked sample showed that this group had many times the number of accidents and traffic convictions experienced by California drivers overall. In addition, subgroups of suspended/revoked drivers, such as those disqualified for driving under the influence (DUI), showed even more deviant records than disqualified drivers overall. Criminal background analyses, conducted on random samples of 150 suspended/revoked drivers and 60 habitual traffic offenders (HTOs), showed that 33% of the suspended/revoked subjects and 80% of the HTOs had arrests for offenses unrelated to Vehicle Code violations. In addition, 17% of the suspended/revoked subjects and 54% of the HTOs were charged with violent offenses.

Convictions of driving while suspended or revoked (CVC §14601) were 2 times as likely if law enforcement officers checked driver license status upon traffic stops than if they didn't, and 4 times as likely if the court checked license status. 14601 convictions were more likely if the driver was cited for 14601 rather than CVC §12500 (unlicensed driver) or CVC §12951 (license not in possession). 67% of drivers cited for 14601 were convicted of this offense, whereas only 4% of drivers who were cited for other nonlicense offenses were convicted of 14601. 14601 convictions were more likely if DMV had proof of service of the suspension/revocation order. The conviction rate of drivers with personal service of the order was 38%, versus 22% for those who had verbally been notified of their license withdrawal, and 15% for those who had been mailed, but had not acknowledged receipt of, the order. 14601 convictions did not vary significantly for drivers based on the reason for their suspension/revocation. Of sample subjects who were stopped and cited for any traffic offense while driving disqualified, only

20% were convicted of 14601. In addition, of those convicted, only about 20% were given sentences which met the minimum prescribed by law.

Analyses Concerning Pilot Program Countermeasures

There was no evidence that a "hot list" of local suspended/revoked drivers led to increased detection and conviction of disqualified drivers. Certified mail showed results of a "good service" rate of approximately 60%, versus 25% obtained using the first-class mailing method utilized by DMV. Service was considered good if it resulted in return of signed evidence (recipient's signature) that the suspension order had been received. The proof-of-service experiment also showed that drivers convicted of a traffic offense while disqualified were (significantly) twice as likely to be convicted of 14601 if they had good service. Results from the proof-of-service experiment demonstrated that certified mail deterred drivers from accruing subsequent accidents and traffic convictions during suspension/revocation.

Analyses Concerning Program Impact

The overall detection rate of disqualified drivers was found to be 41%, while the overall conviction rate was 33%. Analysis of a sample of 14601 convictees revealed that the proportion who were sentenced according to minimum standards did not change significantly as a result of the pilot program. Overall, 38% of sentences met minimum standards. There was evidence that Ventura County judges substituted relatively high amounts of jail for fine, and many 14601 convictees could be considered severely sanctioned even though their sentences did not meet minimum standards. Overall program deterrence was measured by calculating the time from 14601 conviction to first subsequent traffic conviction for samples of disqualified drivers. In Ventura County, approximately 70% of the drivers who were convicted while the pilot program was underway (1989) did not accrue subsequent convictions during a 6-month follow-up period, while only 56% of the drivers convicted before the program was implemented (1988) remained conviction-free. This difference was statistically significant, and was substantially greater than the corresponding differences in a control county. This supports the hypothesis that the pilot program increased specific deterrence in Ventura County. One speculative explanation for this finding is that although individual measures of detection, prosecution, conviction and sentencing failed to show a statistically significant effect, the program countermeasures might have operated jointly to enhance deterrence.

Recommendations

The study recommended that: 1) law enforcement consistently check driver license status and cite under CVC §14601 if the driver is suspended/revoked, 2) the courts identify citations where the driver is suspended or revoked, sentence 14601 convictees according to standards mandated by law, and consider increasing the use of CVC §14602 to impound vehicles of those convicted of driving while disqualified, 3) the DMV notify drivers suspended/revoked for negligent operator and alcohol reasons of their license action by restricted certified mail, improve internal record keeping and client contact procedures, and investigate the need for and feasibility of transmitting certified documentation related to the suspension more quickly to district attorneys and courts, and 4) the Legislature revise statutes to clarify CVC §14601 status, and restructure and simplify the 14601 statutes.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Departmental management decided to initiate legislation authorizing the Department to defray the cost of certified mail by imposing a mail service fee on license suspension recipients.

In December 1993, the San Francisco Chronicle ran a 2-part special feature article on suspended and revoked drivers which quoted extensively the findings and recommendations of this report. This media coverage was the genesis for two significant bills passed in the 1994 Legislative Session, AB 3148 (Katz) and SB 1758 (Kopp), which enacted recommendations contained in this report.

SUPPLEMENTARY INFORMATION:

For more information on the proof-of-service issue, see Gebers and Hanely, "Proof-of-Service Rates for Suspended or Revoked Drivers as a Function of Mailing Contact Strategy" (Report #120).

This study was presented by DeYoung at the Office of Traffic Safety's *Police Traffic Services Seminar* on October 19 1994, in Monterey, CA, and at the *Anti-DUI Forum* on February 16, 1995, in Sacramento, CA. The information contained in this report and report 129 were condensed into a single journal paper by Gebers, DeYoung, and Peck (1997), The Impact of Delivery Service Strategy on the Effectiveness of Driver License Withdrawal—an Experimental Evaluation, *Accident Analysis and Prevention*, 29(1), 65-79.

TITLE: The Traffic Safety Impact of TVS Citation Dismissals

AUTHOR(S): Raymond C. Peck &
Michael A. Gebers

DATE: November 1991

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: 133

NTIS NUMBER: PB92-167527

PROJECT OBJECTIVE:

To reassess the traffic safety impact of California's policy of dismissing and masking traffic citations in lieu of completing a DMV-licensed traffic violator school program.

SUMMARY:

This study identified and compared two large samples of drivers who had either: (1) completed a TVS ($N = 38,131$) or (2) been convicted of a traffic violation ($N = 23,578$) during the period 1987-1989. Prior to adjudication, the TVS group had characteristics that were predictive of a lower subsequent accident expectancy (lower prior accident rate, lower prior conviction rate, higher proportion of females and lower proportion of professional drivers). Despite this finding, the TVS group had significantly more accidents than did the conviction group in the subsequent one-year period. This difference (7.1%) increased to 10.2% when adjusted for the more favorable preexisting characteristics of the TVS group. At least part of the increase in subsequent accident rate was attributed to the loss in general and specific deterrence resulting from the nonconviction, masked status of the citation. It was estimated, for example, that 13,000 TVS graduates each year avoided DMV license control actions because the dismissals did not receive a point count pursuant to California's negligent operator law (CVC 12810). It was also found that the masked status of the TVS dismissal distorted the actuarial validity of the driver record in estimating a driver's future accident risk and in determining a driver's eligibility for "good driver" discounts pursuant to the state's Insurance Code. The report offers the following two recommendations for lessening the detrimental impact of TVS policy: (a) assign negligent-operator points to all TVS dismissals, and (b) unmask the original TVS dismissal whenever a driver receives a second TVS dismissal or subsequent traffic conviction within 18 months.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Recommendations have not been implemented.

SUPPLEMENTARY INFORMATION:

Related studies are Peck et al., Report #71; Gebers et al., Report #113; and Gebers, Report #147.

TITLE: Effectiveness of California Laws in Deterring Drinking and Driving

AUTHOR(S): Clifford J. Helander

DATE: November 1992

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: Unnumbered

NTIS NUMBER: None

PROJECT OBJECTIVE:

This paper, written for presentation at a DUI symposium sponsored by the Automobile Club of Southern California, provides a historical review and evaluation of the impact of California DUI legislation in deterring drinking and driving.

SUMMARY:

California DUI laws have evolved through a process of continual legislative/political competition among rival philosophies of DUI control, rooted in countervailing perceptions of the nature of DUI. Scientific evaluations conducted over the past 20 years have shown the short-term impact of legislative reforms and the longer-term effectiveness of license suspension and SB 38 alcohol treatment programs as DUI countermeasures. The impact of DUI legislation, however, has been totally dwarfed over the past decade by a much larger change in the social environment which has resulted in major reductions in the incidence and consequences of DUI.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Not applicable.

SUPPLEMENTARY INFORMATION:

This paper was presented to, and published in the proceedings of the *DUI Symposium* of the Automobile Club of Southern California, Ontario, CA, November 16-17, 1992.

TITLE: Using Traffic Violator School Citation Dismissals in Addition to Convictions as the Basis for Applying Postlicense Control Actions

AUTHOR(S): Michael A. Gebers,
Raymond C. Peck
Mary K. Janke, &
Robert A. Hagge

DATE: July 1993

REPORT NUMBER: Unnumbered

NTIS NUMBER: None

FUNDING SOURCE: Departmental Budget

PROJECT OBJECTIVE:

To determine whether TVS dismissals should be used, along with negligent operator (neg-op) points, in selecting drivers for level 3 license control action (suspension and probation). Implicit in this objective is the fact that any change in policy (or law) that would include TVS dismissals in triggering license control actions would be expected to produce a corresponding increase in the number of neg-op interventions. It is argued that any group of drivers whose accident expectancy (average accident rate) exceeds that of prima facie negligent (level 3) drivers is a legitimate target group for such actions.

SUMMARY:

Several strategies for using TVS dismissals in addition to neg-op points as the basis for neg-op actions were evaluated in a sample of drivers receiving a TVS citation dismissal for violations occurring during 1989. Specifically, the effect on the annual volume of level 3 neg-op actions, and the number of accident involvements that would be avoided were estimated for each of five selection options.

Each option differed according to the condition under which TVS dismissals would be added to the incident count or, alternatively, the neg-op point count. All options identified additional drivers eligible for level 3 actions and produced reductions in accident involvements. In addition, the accident expectancy for the additional drivers selected for level 3 actions under each option exceeded the average subsequent accident rate of neg-op treatment system (NOTS) level 3 drivers. For example, an option of adding all TVS dismissals to the incident or neg-op point count identified an additional 13,400 drivers eligible for level 3 actions, and would have increased the 1989 volume of level 3 actions by 33%. The 15.75 accident involvement rate (per 100 drivers) for drivers identified under this option was 21% higher than the 12.99 involvement rate (per 100 drivers) for NOTS level 3 drivers. It was estimated that this option would have prevented 220 accident involvements.

Several recommendations were offered for changing the TVS dismissal policy to prevent high-risk drivers' escaping DMV licensing actions by attending TVS.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Legislation was proposed by the department in 1994 to implement the recommendations but it was subsequently rejected by the administration due to budgetary considerations.

SUPPLEMENTARY INFORMATION:

See Peck, Kelsey, Ratz, and Sherman, Report #71; Gebers, Tashima, and Marsh, Report #113; Peck and Gebers, Report #133; and Gebers report #147.

TITLE: The Relationship Between Drug Arrests and Driving Risk

AUTHOR(S): Leonard A. Marowitz

DATE: January 1994

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: 142

NTIS NUMBER: PB94-171899

PROJECT OBJECTIVE:

To determine if drug offenders represent a different driving risk than the general driving population by analyzing total convictions, total accidents, single-vehicle accidents, accident type and investigating officer's determination of fault; and to provide governmental decision makers with an objective evaluation of the relationship between drug offenses and traffic safety for use in determining their position on Public Law 101-516 (driver license suspension or delay upon conviction for a violation of the Controlled Substance Act).

SUMMARY:

During the three year period (1-year pre-arrest and 2-year post-arrest) evaluated, drug arrestees committed 2.02 times as many traffic violations as the general driving population and were involved in 1.45 times as many total accidents. During the year prior to arrest, the drug arrestees committed 2.47 times as many single-vehicle accidents as the general driving population, were significantly more involved in casualty accidents as opposed to property damage only accidents and had significantly greater culpability for the accidents in which they involved.

No single drug arrestee group posed the greatest or least traffic safety risk on all measures, and the hierarchy of drug arrestee groups varied among measures. For pre-arrest measures, the felony dangerous drugs group tended to have the worst record and the felony marijuana group tended to have the best record. No such tendencies were readily discernible for the post-arrest time periods.

The rate of traffic violations and accident involvement by the drug arrestees decreased during the years after arrest (most probably due to incarceration and resultant reduced driving exposure), but the commission of traffic violations by drug arrestees was still significantly greater than for the general driving population (except for felony narcotics group accidents during the two years after arrest).

The highly significant results obtained in this study should be interpreted as indicating a significant correlational relationship between drug arrests and traffic safety risk, and probably indicating at least some degree of causal relationship.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

These findings provide a public safety justification for state and federal initiatives designed to institute driver licensing actions against drug offenders, and some support for the implementation of Public Law 101-516 in California.

SUPPLEMENTARY INFORMATION:

Assembly Bill 79X (Frazee, 1994) was passed and signed into law, effective November 30, 1994 for one year. The law provided that the driver licenses of drug convictees be suspended or delayed for six months for each conviction. Enactment of this law assured that California would receive about \$100 million in federal highway funds for federal fiscal years 1994/1995 and 1995/1996. Federal highway funds were ensured for 1995/1996 federal fiscal year because AB 99X was still in effect on October 1, 1995, the first day of the 1995/1996 fiscal year.

AB 95 (Bowler, 1996) became effective on September 30, 1996 which again required courts to report all drug convictions to DMV, with DMV then suspending the driving privilege for six months all individuals convicted of controlled substance offenses. This legislation will sunset on March 1, 1997.

SB 131 (Kopp, 1997) has been submitted to go into effect after AB 95 sunsets. This legislation declares that the state does not want to impose driver license suspensions on individuals convicted of a violation of the controlled substance act. Instead, the Governor and Legislature will meet the provisions of federal law (PL 101-516) by certifying through this bill to the Secretary of Transportation their opposition to the enactment or enforcement of this law.

AB 79 (Bowler, 1997) has been submitted to remove the repeal date from AB 95, extending the driving suspension sanction for drug convictions. No sunset date has been included in this legislation.

The Secretary of Transportation recently (1997) sent a letter to the Governor and Legislature stating the temporary legislation addressing PL 101-516 would not be considered as meeting the provisions of the law and would result in loss of highway funds.

A revised version of this report has been published in *Alcohol, Drugs and Driving*, 11(1), 1-22, Jan-Mar 1995.

TITLE: Impact on Effectiveness of Level-3 Negligent Driver Actions of Conducting Level-3 Hearings by Phone--A Preliminary Analysis

AUTHOR(S): Raymond C. Peck, &
William C. Marsh

DATE: May 1994

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: Unnumbered

NTIS NUMBER: None

PROJECT OBJECTIVE:

To evaluate the impact of conducting hearings by telephone on the effectiveness of Level-3 interventions in the Negligent Operator Treatment System (NOTS).

SUMMARY:

In July 1992, DMV began conducting negligent operator hearings by telephone. Previously all of these hearings were conducted by telephone. An analysis of the citation records of drivers in treatment groups and comparable drivers in untreated control groups showed no significant change in treatment effectiveness after the introduction of telephone hearings.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The policy of conducting Level-3 hearings by telephone was continued.

SUPPLEMENTARY INFORMATION:

In 1995, a replication of this evaluation with additional data supported the original finding that there was no evidence of an adverse traffic safety impact caused by conducting Level-3 hearings by telephone. (Negligent Operator Treatment Evaluation system: Program Effectiveness Report #7, Research Report #153).

TITLE: Comments on Wells-Parker et al.'s: "Final Results from a Meta-Analysis of Remedial Interventions with Drink/Drive Offenders"

AUTHOR(S): Raymond C. Peck

DATE: 1995

FUNDING SOURCE: Not applicable

REPORT NUMBER: Unnumbered

NTIS NUMBER: None

PROJECT OBJECTIVE:

To apprise the DUI research community of the implications and methodological strengths and limitations of a major publication on DUI treatment and remediation.

SUMMARY:

The review points out some potential limitations of meta-analysis, most of which have been successfully avoided in this excellent work by Wells-Parker and her associates. The authors' conclusion that remediation tends to be associated with a 7-9% reduction in recidivism when combined with license control is consistent with several studies by the California DMV.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Not applicable.

SUPPLEMENTARY INFORMATION:

This review was published in *Addictions* , 90, 1589-1591, 1995.

TITLE: An Evaluation of the Effectiveness of California Drinking Driver Programs

AUTHOR(S): David J. DeYoung

DATE: January 1995

FUNDING SOURCE: California Department of
Alcohol and Drug Programs
(DADP)

REPORT NUMBER: 146

NTIS NUMBER: None

PROJECT OBJECTIVE:

To evaluate the effectiveness of California's Drinking Driver Programs, relative to other court and administrative sanctions. Secondly, to determine whether changes in first offender programs (e.g., their consolidation under DADP licensing and review) and SB 38 programs (e.g., lengthening the programs from 12 to 18 months) enhanced their effectiveness.

SUMMARY:

There has been longstanding interest in determining which sanctions work best to reduce drunk driving. This study examined the degree to which first offenders, SB 38 and 30-month drinking driver programs (DDPs) in California reduced drunk driving recidivism, relative to other sanctions, such as driver license suspension. Based on the findings from this study, as well as those from prior research, this report recommends combining alcohol treatment with driver license actions as the best strategy for reducing drunk driving recidivism and enhancing overall traffic safety.

Of lesser importance, but also examined, is whether changes in first offender and SB 38 DDPs increased their effectiveness in reducing recidivism. The analysis found no evidence to support the hypothesis that changes in these programs increased their effectiveness.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The report was submitted to the DADP pursuant to SB 1344 (Seymour) [Chapter 803, 1989 Legislative Session].

This paper was presented by DeYoung at the California Office of Traffic Safety's *Summit 95 Conference* on May 9 in San Diego, and at the California Association of Drinking Driver Treatment Programs *Spring 95 Forum* on June 9 at Palm Springs, CA.

TITLE: Knowledge and Attitude Change and the Relationship to Driving Performance Among Drivers Attending California Traffic Violator School

AUTHOR(S): Michael A. Gebers

DATE: February 1995

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: 147

NTIS NUMBER: PB95-267696

PROJECT OBJECTIVE:

This study measured each traffic violator school (TVS) attendee's level of knowledge of safe-driving practices and rules of the road, and driving attitudes, before and after course instruction. The study addressed the following two questions:

- (1) Is gain in knowledge competency and change in driver attitudes resulting from TVS course attendance dependent upon the course's method of instruction, type of provider, or use of advertising inducements?
- (2) What is the relationship between a student's change in level of knowledge resulting from course attendance and his or her driving record?

SUMMARY:

Test performance and survey data were collected from 900 traffic violator school students graduating from the 68 randomly selected traffic violator schools participating in the study.

Study results provided support for the following conclusions:

- Exposure to TVS had only a small effect in improving the knowledge level of the attendees. Although the gain in knowledge was statistically significant, the posttest scores were only 8% higher than the pre-course scores.
- There was no evidence that exposure to TVS resulted in a change in attitude toward traffic safety.
- Knowledge and attitude change was not significantly related to method of instruction, type of provider, or use of an inducement to attract enrollees.
- There was no significant relationship between knowledge gain and subsequent accident involvement, or between attitude change and driver record entries.
- Knowledge gain was associated with fewer subsequent traffic citations; however, the magnitude of the relationship was small.

It was recommended that to the extent that one of the goals of TVS is to increase knowledge of safe driving practices, there may be some value in requiring an exit test as a condition for receiving a TVS completion certificate. Such a mechanism would probably increase the attentiveness of the offenders during the course, thereby promoting increased learning. This requirement might also promote greater instructor diligence and improved curricula design. However, there is no evidence at this time to conclude that such an increase in knowledge would result in a reduction in subsequent accident involvements.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

None as of this writing.

SUPPLEMENTARY INFORMATION:

Bloch, S. A. (1994). *The effectiveness of traffic violator schools: An examination of their effects on driver knowledge, attitudes and performance*. Los Angeles, CA: Automobile Club of Southern California. Findings from Bloch were similar to the present study with regard to the small amount of improvement in driver knowledge, attitudes, and driving performance.

Pilot study of California's traffic violator school pretest/posttest forms. Unpublished manuscript, California Department of Motor Vehicles.

See Gebers, Tashima, and Marsh, Report #113; Peck and Gebers, Report #133; Peck, Kelsey, Ratz, and Sherman, Report #71; and Gebers, Peck, Janke, and Hagge, Hanging File #201.

TITLE: Driver License Strategies for Controlling the Persistent DUI Offender

AUTHOR(S): Raymond C. Peck,
J. Wilson &
L. Sutton

DATE: February 1995

REPORT NUMBER: Unnumbered

FUNDING SOURCE: Partial support from
Transportation Research Board

NTIS NUMBER: None

PROJECT OBJECTIVE:

To develop improved methods of identifying and controlling “hardcore” DUI offenders through driver licensing.

SUMMARY:

The paper identifies five driver license processes that interface with DUI offenders and problem drinkers: (1) driver license screening and renewal; (2) problem identification; (3) postlicense driver control actions; (4) treatment and sanction compliance monitoring; and (5) reinstatement of license privilege. A number of recommendations are offered for using driver licensing to better control persistent DUI offenders.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The majority of the recommendations are consistent with current California practice and policy.

SUPPLEMENTARY INFORMATION:

This paper was presented at a workshop sponsored by Transportation Research Board’s *Committee on Alcohol, Other Drugs and Transportation*. It was subsequently published as a chapter in Transportation Research Board Circular #437 (“Strategies for Dealing with the Persistent Drinking Driver,” February 1995.)

TITLE: California's Negligent Operator Treatment Program Evaluation System, 1976-1995-
-An Overview of Findings and Program Improvements

AUTHOR(S): Raymond C. Peck &
Erin J. Healey

DATE: August 1995

REPORT NUMBER: 155

FUNDING SOURCE: Departmental Budget

NTIS NUMBER: PB96-118104

PROJECT OBJECTIVE:

To quantify the benefits derived from a computerized system for evaluating the effectiveness of California's negligent operator treatment program during the period 1976-1995.

SUMMARY:

This report documents what was learned from a controlled evaluation system which provided annual and biennial reports on California's negligent driver treatment program during the period 1976-1995. The report concludes that improvements and policy changes triggered by evaluation findings can be credited with preventing an additional 13,000 accidents during the period 1984-1994.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Several of the recommendations contained in the reports were implemented and are reflected in current California policy. The evaluation system was discontinued in November 1994.

SUPPLEMENTARY INFORMATION:

A report on the historical study results was presented at the *17th Annual Institute on Research and Statistics*, California State University, Sacramento, April 3, 1996 (Healey E. J.). An article *California Develops Improved Problem Driver Countermeasures*, by Ray Peck, was published in TR News (Number 201, 27-29, March-April 1999). For related California DMV studies, see Marsh et al. (Reports #102, #110, #115, #117, #128, #137 and #153).

TITLE: The General Deterrent Impact of California's 0.08% Blood Alcohol Concentration Limit and Administrative Per Se License Suspension Laws (Volume 1 of "An Evaluation of the Effectiveness of California's 0.08% Blood Alcohol Concentration Limit and Administrative Per Se License Suspension Laws")

AUTHOR(S): Patrice N. Rogers

DATE: September 1995

FUNDING SOURCE: Office of Traffic Safety and
National Highway Traffic
Safety Administration

REPORT NUMBER: 158

NTIS NUMBER: PB96-165154

PROJECT OBJECTIVE:

To evaluate the traffic safety impact of the 1990 laws that lowered the state's per se blood alcohol concentration limit to 0.08% and introduced an immediate administrative per se license suspension for DUI.

SUMMARY:

This project evaluated the effects of two new driving-under-the-influence (DUI) laws implemented in California. The first law, effective January 1, 1990, reduced California's illegal per se limit to 0.08% blood alcohol concentration (BAC) and the second, effective July 1, 1990, imposed an administrative per se (APS) pre-conviction license suspension on DUI offenders. Intervention time series analysis was used to evaluate the deterrent impact of these laws on the general population of DUI offenders as measured by the effects on alcohol-related traffic accidents.

In spite of the new laws being imposed in an environment of already strict sanctions for DUI, relatively high use of post-conviction license suspension actions, and a long-term downward trend in alcohol-involved accidents, the results of this evaluation showed a significant general deterrent effect associated with the implementation of the APS law, with somewhat less support for such an effect associated with the 0.08% BAC per se limit law. Larger proportions of the observed accident reductions were associated with the timing of the APS law than with the lowering of the illegal per se limit. Some, but not all, of these reductions were statistically significant, even after accounting for additional socioeconomic factors shown to contribute to the consistent downward trend observed in both the alcohol- and nonalcohol-related accident series. There was suggestive evidence that a media campaign initiated approximately one year after implementing the APS law may have enhanced that law's effectiveness.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Study provided support for the new laws.

SUPPLEMENTARY INFORMATION:

Recommendations to impose pre-conviction administrative license suspension in California were published in Tashima and Peck, Report #95; Sadler, Report #96; Helander, Report #97; and Peck, Report #112.

TITLE: Negligent-Operator Treatment Evaluation System (NOTES): Program Effectiveness Reports

AUTHOR(S)

Report #1:	William C. Marsh & Daniel J. Kadell	<u>DATE:</u> December 1985 <u>REPORT NUMBER:</u> 102 <u>NTIS NUMBER:</u> PB86-177706/AS
Report #2:	William C. Marsh	<u>DATE:</u> December 1986 <u>REPORT NUMBER:</u> 110 <u>NTIS NUMBER:</u> PB87-190674/AS
Report #3:	William C. Marsh	<u>DATE:</u> December 1987 <u>REPORT NUMBER:</u> 115 <u>NTIS NUMBER:</u> PB88-215652/AS
Report #4:	William C. Marsh	<u>DATE:</u> December 1988 <u>REPORT NUMBER:</u> 117 <u>NTIS NUMBER:</u> PB89-230569
Report #5:	William C. Marsh	<u>DATE:</u> December 1990 <u>REPORT NUMBER:</u> 128 <u>NTIS NUMBER:</u> PB92-101625
Report #6:	William C. Marsh	<u>DATE:</u> December 1992 <u>REPORT NUMBER:</u> 137 <u>NTIS NUMBER:</u> None
Report #7:	William C. Marsh Erin J. Healey	<u>DATE:</u> December 1995 <u>REPORT NUMBER:</u> 153 <u>NTIS NUMBER:</u> PB96-144324

FUNDING SOURCE: Departmental Budget

PROJECT OBJECTIVE:

To implement and maintain an automated on-line evaluation system for monitoring the effectiveness of the negligent-operator (neg-op) program and to issue periodic reports which present program cost and impact data for this program.

SUMMARY:

This series of reports provides periodic cost-effectiveness analyses of the neg-op program. The evaluation is based on a comparison of the driver records of neg-ops (drivers with multiple traffic conviction and/or accident points) who were randomly assigned to a treatment or to a no-contact control group. Three levels of progressively more severe neg-op treatments were evaluated in this manner—warning letter (W/L), notice of intent to suspend (N/I) and probation hearing (P/H). Beginning with Report #4, probation violation suspensions (the

fourth and most severe level of neg-op treatment) were evaluated indirectly, using data from level-3 recidivists. Drivers at each level were eligible to receive either a standard or an alcohol-tailored treatment.

Report #1 (December, 1985): The three treatments under evaluation by NOTES reduced the number of drivers cited for traffic offenses. Reductions of 10.2%, 9.9%, 22.5%, were found for W/L, N/I and P/H treatments, respectively. Each of these reductions was highly significant statistically. These reductions in cited drivers were similar to those found for comparable treatments in the previous neg-op programs. However, the impact of NOTS was considerably greater, because it treated almost four times the number of drivers. Furthermore, the greater impact was achieved at a slightly lower cost. No attempt was made to evaluate treatment effects on subsequent accidents because the sample sizes and follow-up intervals were too small to reliably detect differences in accident rates. An evaluation of the accident-reduction impact of the program appeared in Report #2.

Report #2 (December 1986): The standard P/H was the only treatment which produced a consistent and statistically significant reduction in accidents. However, the fact that the reduction appeared only in noninjury accidents raised the possibility that the reduction might have been caused by underreporting of these property-damage-only (PDO) accidents by treated drivers (this finding was not supported by the new data in subsequent reports). Although there was some evidence that the warning letter treatments at levels 1 and 2 (W/L and N/I) produced a small, short-term reduction in accidents, the pattern of these treatment effects over the entire follow-up period was too inconsistent to justify firm conclusions about the effectiveness of these letters in reducing accidents. Each of the standard treatments produced a statistically significant reduction in traffic citations. At each level, the standard treatment was more effective in reducing accidents and citations than the corresponding alcohol treatment, although the differences in effectiveness were not always statistically significant. At each level, drivers in the alcohol control group represented a lower risk in terms of future accident and citation involvement than drivers eligible for the corresponding standard treatment.

Report #3 (December 1987): When the results for the W/L and N/I (levels 1 and 2) were combined, they revealed a statistically significant reduction in accidents. The standard P/H (level 3) was the only treatment which produced a statistically significant reduction in accidents when analyzed by itself. Furthermore, in the data collected following the data extraction for Report #2, there was no evidence of any underreporting of PDO accidents for the standard P/H treatment group. At each level the evidence indicated that the treatments were effective in reducing both injury accidents (fatal and nonfatal combined) and noninjury accidents. Each of the standard treatments produced a statistically significant reduction in traffic citations. The standard P/H treatment (level 3) produced the largest impact on accidents and citations. Generally speaking, each standard treatment was more effective in reducing accidents and citations than the corresponding alcohol treatment. At each level, drivers in the alcohol control group generally represented a lower risk in terms of future accident and citation involvement than drivers eligible for the corresponding standard treatment; the one exception to this rule was major traffic convictions, for which the alcohol groups represented higher risks.

Report #4 (December 1988): When the results of warning letters and notices of intent (levels 1 and 2) were combined they revealed a statistically significant reduction in total accidents. The standard probation hearing (level 3) was the only treatment which produced a statistically

significant reduction in total accidents when analyzed by itself. Regarding injury accidents, both the alcohol warning letter and alcohol notice of intent were significantly more effective than the corresponding standard treatments at levels 1 and 2, while at level 3 the data showed the opposite trend, with the standard probation hearing treatment appearing to be more effective than the alcohol treatment. Although the latter result was not statistically significant, it was suggestive of a differential effect ($p < .11$). At each of the first three levels the standard treatment was significantly more effective in reducing citations than the corresponding alcohol treatment. Regarding alcohol- and drug-related incidents, only the level 3 standard treatment produced a statistically significant reduction. At level 4, the data showed strong indirect evidence that probation-violator sanctions were very effective in reducing accidents and citations.

Report #5 (December 1990): Both W/Ls and N/Is independently showed significant reductions of accidents. The results for level 3 revealed that the standard P/H significantly reduced accidents and showed that the standard intervention was significantly better than the alcohol P/H, which had an accident rate that was directionally worse than its control group's rate (although this latter finding was not statistically significant). At level 3 the findings for injury accidents (those involving an injury or fatality) paralleled those for all accidents. When the results for levels 1 and 2 were combined, the letters showed a significant reduction in injury accidents with the alcohol letters at levels 1 and 2 being significantly more effective than the standard letters. At each of the first three levels only the standard intervention produced a significant reduction in traffic citations, and these results were significantly better (more effective) than those for the corresponding alcohol intervention. Regarding alcohol- and drug-related incidents, only the level 3 interventions produced a statistically significant reduction. At level 4, the data again showed strong indirect evidence that the probation-violator sanctions were effective in reducing accidents and citations.

Report #6 (December 1992): Only at level 3 was there a statistically significant reduction in total accidents due to the interventions, although there was some evidence that the interventions at levels 1 and 2 also reduced total accidents. Regarding injury accidents, both levels 1 and 3 showed statistically significant impacts. Intervention at each of the first three levels produced statistically significant reductions in traffic citations; however, at levels 1 and 2 each of the standard letters was significantly more effective in reducing citations than the corresponding alcohol letter. Regarding alcohol- and drug-related incidents, only the level-3 intervention produced statistically significant reductions. At level 4, the data showed strong indirect evidence that probation violator sanctions were very effective in reducing accidents and citations. A comparison of telephone versus in-person hearings at level 3, showed no evidence of any adverse impact on traffic citations associated with the adoption of telephone hearings.

Report #7 (December 1995): Interventions at all four program levels produced statistically significant reductions in traffic citations and, with the exception of Level 2, resulted in statistically significant reductions in accidents. Specifically, drivers receiving the Level-1 or Level-2 letters had fewer accidents than their control counterparts. These differences were statistically significant in the first six months after treatment for Level 1, but not for Level 2. Additionally, the P/H treatment at Level 3 produced a statistically significant reduction in subsequent accidents, and the probation-violator suspension treatment at Level 4 resulted in an even greater reduction in accidents. Except for Level 2, the treatments were effective in

reducing serious accidents (those involving injury or fatality) as well as those involving property damage only. Several changes to the NOTS program were also evaluated. There was some evidence that the increased use of license suspension among drivers attending Level-3 probation hearings led to an increase in the effectiveness of the treatment. There was no indication that the introduction of telephone hearings at Level 3 had any adverse impact on traffic safety. Additionally, with respect to subsequent accident and citation involvement and hearing attendance, there was statistically significant evidence that drivers with prior citations for driving while suspended were less responsive to treatment at Level 3. During the period covered by the report (1991-1994), it is estimated that the NOTS program prevented 1,500 accidents per year.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Report #1 supplied DMV, the Legislature and other decision makers within California with cost and effectiveness data which supported the continuation of the neg-op program until more definitive results became available in later reports.

Reports #1 through #7 generally supported the continuation of the neg-op program, except that the inconsistent accident results for the level 1 treatment in Report #2 supported a decision to discontinue sending level 1 W/Ls in May 1987. However, more positive findings in Reports #3 and #4 led to a reversal of that decision, and DMV resumed sending level 1 W/Ls in September 1989. A recommendation in Reports #2 and #3 that the use of license suspensions be increased in the regular level-3 treatments was adopted and implemented in the fall of 1988. Reports #2 and #4 recommended the elimination of the alcohol treatment at level 3 (because of negative directional results). These results plus questions about the legal authority for this treatment led to its discontinuance in September 1989.

Reports #6 and #7 evaluated the adoption of telephone hearings (versus in-person hearings), neither report showed any negative safety impact related to the change in policy. These results tended to support the continued use of the new hearing format.

SUPPLEMENTARY INFORMATION:

See Marsh, 1985 (Report #94) *Negligent-Operator Treatment Evaluation System: Progress Report*.

A paper containing results of Report #4 was presented at the *Conference on Driver Competency Assessment*, San Diego, October 1990.

TITLE: The Specific Deterrent Impact of California's 0.08% Blood Alcohol Concentration Limit and Administrative Per Se License Suspension Laws Volume 2 of: An Evaluation of the Effectiveness of California's 0.08% Blood Alcohol Concentration Limit and Administrative Per Se License Suspension Laws

AUTHOR(S): Patrice N. Rogers

DATE: January 1997

FUNDING SOURCE: Departmental Budget and National Highway Traffic Safety Administration

REPORT NUMBER: 167

NTIS NUMBER: PB98-105570

PROJECT OBJECTIVE:

To evaluate the specific deterrent impact of the 1990 laws that lowered the state's driving-under-the-influence (DUI) per se blood alcohol concentration limit to 0.08% and introduced an immediate administrative license suspension for DUI.

SUMMARY:

This project evaluated the impact of two new California DUI laws on the subsequent alcohol-related accident and recidivism rates of apprehended DUI offenders. The first law, effective January 1, 1990, reduced California's illegal per se limit to 0.08% blood alcohol concentration (BAC) and the second, effective July 1, 1990, imposed an administrative per se (APS) pre-conviction license suspension on DUI offenders. Logistic regression analysis was used to evaluate the specific deterrent impact of these laws by comparing the subsequent recidivism and alcohol-related accident rates of DUI offenders arrested before and after implementation of the new laws.

The evaluation showed that the new laws were highly effective in reducing subsequent accidents and recidivism among DUI offenders, whether or not the offenders were subsequently convicted of their offense. There were significant reductions in all three of the 1-year indices of recidivism assessed (1-year subsequent total accidents, had-been-drinking accidents, and DUI convictions), with reduction magnitudes ranging between 19.5% and 37.1% from pre-law recidivism rates. The magnitude and consistency of the reductions provide compelling evidence that administrative license suspension is a highly effective means of reducing recidivism among first and repeat DUI offenders. The enactment of the 0.08% law accentuated the net deterrent effect of the APS law by increasing the number of DUI offenders who were suspended by about 3,300 per year.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The findings provide confirmation for previously recommended statutory changes.

SUPPLEMENTARY INFORMATION:

Recommendations to impose post-conviction license suspension in California were published in Tashima and Peck, Report #95. Recommendations to impose pre-conviction administrative license suspension in California were published in Sadler, Report #96; Helander, Report #97; and Peck, Report #112. Recommendations for enactment of a 0.10% illegal per se BAC threshold were made in a 1975 legislative report pursuant to Senate Concurrent Resolution 44-Harmer

(Epperson, Harano & Peck, 1975). The effectiveness of California's 1982 law establishing a 0.10% illegal per se BAC threshold is evaluated in Rogers and Schoenig, Report #123.

Summaries of administrative per se actions are published each fiscal-year and calendar-year as "Administrative Per Se Facts, California." These fact sheets date back to July 1990.

TITLE: Using Traffic Conviction Correlates to Identify High Accident-Risk Drivers

AUTHOR(S): Michael A. Gebers &
Raymond C. Peck

DATE: June 2000

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: 187

NTIS NUMBER: PB2001-100213

PROJECT OBJECTIVE: To further explore the viability of predicting total accidents from equations developed to predict total convictions for the general driving population.

SUMMARY: Models that better identify drivers at increased risk of future accident involvement will increase the number of accidents prevented through post license control actions.

Although the results do not support the hypothesis that equations keyed to citations do as well as or better than equations keyed to accidents in predicting subsequent accidents, the results suggest that identification of future accident-involved drivers can be improved by either of two approaches. The first is to construct equations based on a combination of prior accidents and citations. California's neg-op system basically reflects such an approach since points are allocated to traffic convictions and culpable accidents. The second alternative is more elaborate, involving a truly multivariate approach in which the prediction equation consists of a two-variable vector of subsequent citations and accidents. The canonical correlation analysis performed for this study resulted in two orthogonal canonical functions or roots: A driving-incident function consisting of primarily citations and secondarily accidents and an almost exclusively accident function.

The results reported in this study indicate that subsequent driving record can be predicted from prior driving record for groups of individuals; however, the error rates at the individual level are inherently large. The models derived from the canonical analysis, while superior to the simpler models, would be very difficult to implement operationally. The most obvious problem relates to its complexity. Canonical correlation is difficult to comprehend. Another problem is that the equations contain a number of variables (e.g., age and gender) that would not be legally defensible in taking license control actions. This problem could be rectified, with some sacrifice in predictive power, by deleting the unacceptable variables. In addition, use of variables such as age and gender might be permissible for triggering educational advisory interventions.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

SUPPLEMENTARY INFORMATION: Published in *Accident Analysis and Prevention*, 35, 2003.

TITLE: Feasibility of a Statewide Vehicle Impoundment Database

AUTHOR(S): David DeYoung

DATE: January 2001

FUNDING SOURCE: Departmental Budget

REPORT NUMBER: 189

NTIS NUMBER: PB2001-108021

PROJECT OBJECTIVE:

This project established and convened an interagency task force to investigate whether it is feasible to develop a statewide database that tracks vehicle impoundment actions taken by law enforcement, and if it proves feasible, to develop a model of the database.

SUMMARY:

A 1997 DMV study evaluating the effectiveness of vehicle impoundment in California found that it was associated with significant declines in subsequent crashes, moving violation convictions and driving-while-suspended/ driving-while-unlicensed convictions. However, apart from the information provided by this study, little else is known about vehicle impoundment in California, because there is no centralized statewide database of impoundment actions. A statewide database could provide information that could be used to monitor the integrity of vehicle impoundment in California, and also to assist Legislators in making informed policy decisions on impoundment.

The purpose of the present study was to explore whether it is feasible to develop a statewide vehicle impoundment database, preferably using existing reporting systems and databases so that the creation of the database would not add significant new tasks and responsibilities on law enforcement. An interagency task force was convened to explore the feasibility of creating a statewide impoundment database and, if feasible, to develop a model of the database. The task force determined that it is feasible to develop the database, and recommended that it be based upon an existing system in which law enforcement agencies report vehicle impoundment actions to the Department of Justice's Stolen Vehicle System database. A Memorandum of Understanding will be written by DMV staff and sent to the Office of Traffic Safety requesting funding to develop the database.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The task force found that it is possible to develop a statewide vehicle impoundment database, and proposed a model of the database. However, the California Highway Patrol, which would play an important role in participating by keying data into the database, declined to participate, effectively delaying the implementation of the recommendations indefinitely.

SUPPLEMENTARY INFORMATION:

This project is related to DeYoung, report # 171, and DeYoung, report # 180.

TITLE: An Evaluation of the Implementation of Ignition Interlock in California

AUTHOR(S): David J. DeYoung

DATE: May 2002

FUNDING SOURCE: Office of Traffic Safety

REPORT NUMBER: 195

NTIS NUMBER: PB2003-104211

PROJECT OBJECTIVE:

This study tracked samples of drivers convicted of driving while suspended through court, DMV, law enforcement and ignition interlock installer records, to determine the degree to which California's ignition interlock laws have been implemented.

SUMMARY:

California law requires judges to sentence offenders convicted of driving on a DUI-suspended driver license (DWS-DUI) to install an ignition interlock device (IID) on any vehicle that they own or operate. In addition, repeat DUI offenders can reduce their suspension period by half and obtain a restricted license by installing an IID. This report presents the results of a process study of the degree to which California's IID laws have been implemented.

The process evaluation consists of several components. DWS-DUI and DUI offenders were tracked through law enforcement, DMV, court and ignition installer records to obtain data on rates of DWS convictions, court-IID orders, IID installations and offender success on the IID program. In addition, DMV records were utilized to obtain data on court-IID orders throughout the state, over time and jurisdictions. Finally, judges, district/city attorneys and offenders were surveyed to obtain data on barriers to the use of IIDs, and attitudes and opinions of the devices.

The results of the process studies showed that DWS conviction rates were less than 20%, court-IID order rates for DWS-DUI convictees, for whom such an order is required by law, were only about 25%, and only a minority of offenders ordered to install a device complied and installed an interlock. In addition, relatively few repeat DUI offenders chose to obtain a restricted license by installing an IID.

While some recommendations are made for improving the current IID countermeasure system, it is strongly recommended that the current IID laws remain unchanged until the results of the legislatively-mandated outcome evaluation of California's interlock laws are available.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The report recommended that changes be made in the way IID orders/restrictions are reported, and that an improved monitoring system for tracking defendants ordered to install an IID be developed. So far, neither recommendation has been adopted. The report also recommended that no changes be made to the interlock laws until the results of the IID outcome study are available, after July 1, 2004, and this important recommendation has been followed.

SUPPLEMENTARY INFORMATION:

This study is integrally related to the federally-funded and legislatively-mandated study of the effectiveness of IID in California, which is due to the Legislature July 1, 2004. The study was published in the Journal of Safety Research, 33 (2002).

TITLE: Application of Behavior Change Theory to the Development of an Enhanced California Negligent Operator Treatment and Evaluation System

AUTHOR(S): Robert A. Roberts

DATE: November 2002

FUNDING SOURCE: Office of Traffic Safety

REPORT NUMBER: 199

NTIS NUMBER: PB2003-104210

PROJECT OBJECTIVE:

To develop an enhanced negligent-operator treatment and evaluation system (ENOTES) based upon a critical review of the scientific literature designed to identify the treatment methods used in driver improvement studies, to estimate the strength of the scientific evidence supporting the various treatment methods, and to develop a scientifically rigorous procedure to evaluate the effectiveness of the new ENOTES program.

SUMMARY:

Through this critical review of the literature and evaluation of warning letter contents, the foundation has been set for the development of an enhanced negligent-operator treatment and evaluation system (ENOTES) for California. Criteria to evaluate the treatment letters were developed from the 16 components of the Transtheoretical Model (TTM) of behavior change that, incidentally, incorporates the majority of the recommendations made by traffic safety researchers over the past 50 years. The evaluated studies were tabulated by the strength of the evidence supporting each treatment in terms of the quality of the research and the validity of the methods as defined by the degree to which they reflected components of the TTM.

Overall, the research designs were outstanding. However, the warning letters themselves were weaker, and generally not strongly tied to a theory of behavior change. On average, 2.5 of the six General Stage, 1.8 of the five Early Stage, and 0.29 of the five Late Stage TTM elements were utilized. No balanced treatment letters were identified that incorporated the majority of the TTM elements available from all three stages. A definite opportunity exists to strengthen the effectiveness of letter treatments through intelligent use of the TTM

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

Implementation of ENOTES is proceeding with the development of new Level I, II, and III treatment letters, using appropriate elements of the Transtheoretical Model of behavior change, to increase the impact and cost-effectiveness of each intervention letter over the treatment interventions reported in the old negligent-operator treatment system (NOTS) evaluations. A rigorous evaluation design has been adopted to determine if the objectives have been met and a report of the survival results for negligent-operators entering ENOTES during the first six-months of the project will be submitted to OTS by September 30, 2006.

SUPPLEMENTARY INFORMATION:

None